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ABSTRACT

This document presents the lessons of Jobs for the Future's Benchmark Communities Initiative (BCI), a 5-year systemic educational reform initiative launched in 1994 in five communities. Before joining the BCI, the five Benchmark communities had each begun a school-to-career effort. Five key findings from the BCI are outlined: (1) students engaged in intensive school-to-career experiences that have strong work-based learning components compare favorably to peers on a number of key academic achievement indicators; (2) for school-to-career efforts to affect overall student outcomes significantly, specific program activities and components must be defined as core elements of the district's overall reform strategy; (3) enabling conditions that make a systemic reform agenda possible are a high-level leadership group bridging all partners and institutions that convene and connect those partners; (4) districts and their partners can enhance the educational value of students' work-based learning experiences in spite of serious barriers; and (5) data can be a powerful driver for reform when communities create a process for measuring the right things at the right time. Performance measurement was central to the BCI effort, helping partners to hold one another accountable for progress toward agreed-on goals. (SLD)

From Innovative Programs to Systemic Education Reform

Lessons from Five Communities

The Final Report of the
Benchmark Communities Initiative

By Larry DeSalvatore,
Susan Goldberger, and
Adria Steinberg

Jobs for the Future

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From Innovative Programs to Systemic Education Reform

Lessons from Five Communities

**The Final Report of the
Benchmark Communities Initiative**

**By Larry DeSalvatore,
Susan Goldberger, and
Adria Steinberg**

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Executive Summary

From Innovative Programs to Systemic Education Reform documents the lessons of Jobs for the Future's Benchmark Communities Initiative (BCI), a five-year systemic education reform initiative launched in 1994. In collaboration with Jobs for the Future, five communities—Boston, Massachusetts; Louisville/Jefferson County, Kentucky; Milwaukee, Wisconsin; North Clackamas, Oregon; and Philadelphia, Pennsylvania—set out to develop and demonstrate effective approaches to improving young people's transitions into postsecondary education and careers.

At the height of the nationwide movement toward standards-based reform, the BCI communities placed themselves at the forefront of a particular approach to improving student outcomes, one that sought to:

- Engage all students in intellectually challenging and relevant studies;
- Provide those students with productive workplace and community learning opportunities;
- Personalize learning by creating small communities of teachers and learners, bound by a unique identity, a curricular focus, and a common purpose; and
- Establish structured connections to higher education and economic opportunities.

Several of these reform elements were not unique to the BCI. Challenging academics, personalized learning, and bridges to postsecondary education are staples of the systemic change agendas promoted by many school reformers. Jobs for the Future and the five "Benchmark Communities" undertook an approach that differed in its emphasis on learning in and from the community as a core element of systemic education reform. This focus on "community-connected learning," through work-based and other learning experiences outside the classroom and through relationships with adults in settings outside of school, grew out of Jobs for the Future's experience with school-to-career initiatives. Jobs for the Future and its partner communities believed that this education reform agenda could improve students' motivation to learn, their levels of academic achievement, and their career-related skills and strategies.

Prior to joining the BCI, the five Benchmark Communities had each launched a school-to-career effort. In deciding to collaborate with Jobs for the Future in the BCI, they committed to expanding those efforts community-wide and to designing systemic reforms that would reach significant numbers of young people. The partners all believed that district-wide strategies combined with outreach to, and the engagement of, the business community and others outside the schools were critical to advancing the BCI's reform agenda. *From Innovative Programs to Systemic Education Reform*

focuses on the progress and dynamics of these efforts, with particular attention to four areas of activity (detailed in the report's four chapters):

- Establishing and growing a systemic reform initiative;
- The quality and effectiveness of work-based learning;
- Professional development in support of community-connected teaching; and
- The use of data to drive and support reform.

From Innovative Programs to Systemic Education Reform chronicles the key findings emerging from the Benchmark Communities Initiative. Together, they indicate the promise of community-connected learning as a vehicle for school reform, particularly at the high school level—and the challenges this approach presents. A complete listing of our findings concludes this Executive Summary; here we highlight five findings that are particularly important and relevant to current discussions about systemic reform strategies:



1. *Students engaged in intensive school-to-career experiences that have strong work-based learning components compare favorably to peers on a number of key academic achievement indicators.*

Data collected by BCI communities suggests that, compared with their peers, students in school-to-career programs with an intensive work-based learning component attended school more regularly, were less likely to drop out, achieved higher grades, and were promoted at a higher rate. Furthermore, longitudinal research in one community found that students who participated in

intensive work-based learning were more likely than a comparison group to attend and remain in college and to earn a degree.

Participation in this intensive work-based learning program also appears to lead to higher wages. Several months after graduation, program graduates who were no longer attending college—and thus fully invested in finding a good job—were earning significantly more per hour than a comparison group of students.

2. *For school-to-career efforts to significantly affect overall student outcomes, specific program activities and components must be defined as core elements of the district's overall reform strategy.*

Each BCI community made a commitment to expand its existing school-to-career program into an approach to improving student outcomes district-wide. This required the district and its partners to make two distinct commitments: 1) to implement a specific, concrete set of reforms in the district's educational program; and 2) to define these reforms as central to the success of the district's reform agenda, particularly for high schools, and not as a special program for some students.

In three BCI communities, these conditions were met; school-to-career became an impetus to district-wide high school reform that continue to evolve and advance. In another BCI community, however, the first condition was not met: there was not enough agreement on priorities for specific reforms to be implemented. The principles of community-connected learning became part of the district's rhetoric, but definitions of program design and priorities differed significantly among key stakeholders. As a result, the commitment to implementation was weak, and slow progress in implementation made it difficult for school-to-career proponents to sustain their district's efforts when a new superintendent sought to change priorities and direction.

In the fifth BCI community, it proved difficult to achieve the second condition: that the reform effort be systemic and not isolated. In this district, educators, parents, and the community defined the initiative primarily as a vocational education reform, not as a plan for improving academic and career outcomes for all students. As a result, the reform effort was less comprehensive and support for it was weaker, within and outside the school system.

3. *Two enabling conditions make it possible for communities to advance a systemic education reform agenda: 1) a high-level leadership group bridging the school, business, postsecondary, and political communities; and 2) institutions that are staffed to convene and connect those partners.*

A key BCI lesson is that support from stakeholders outside the schools helps sustain reform despite changes in superintendents, principals, or state policies. Conversely, the absence of such support increases the vulnerability of reform to inevitable changes in school district leadership and political trends. Particularly in large districts, the need for business, community, and postsecondary education leaders to help stabilize and protect the long-term reform agenda cannot be overstated.

Also critical to the ability of a community to expand its school-to-career effort into a broad strategy for whole school reform is the development of effective vehicles for recruiting and serving large numbers of business and community partners. For the BCI communities, successful recruiting depended upon an effective infrastructure designed to perform this critical intermediary function, whether through a school-district office or an independent organization charged with sustaining and deepening vibrant school-community partnerships.

4. *Despite serious barriers, districts and their partners can enhance the educational value of students' work-based learning experiences and do so in ways that reach large numbers of young people.*

The central insight of the BCI was its recognition that the wider community can and should play a substantive role in student learning. Ideally, the school and its community comprise a seamless environment in which students combine knowing with doing. However, the barriers to creating such an environment are significant, from rigid school schedules to the challenge of developing large numbers of high-quality work placements.

In addressing these issues, the BCI communities discovered strategies that improve the quality of work-based learning experiences. They have promoted learning in the community that is rigorous as well as relevant by: targeting quality work settings and experiences; integrating SCANS skills into district curricula and standards; and implementing community-connected senior project and exhibition requirements.

Especially promising is the use of work-based learning plans as a means of guiding and assessing students' workplace learning. These plans help students develop work-related skills and competencies, such as teamwork, problem-solving, using technology, and communication. After piloting in two BCI communities, this strategy has become more common nationwide.

5. Data can be a powerful driver for reform when communities create a process for measuring the right things at the right times.

The BCI experience confirms the double-edged impact of focusing exclusively on narrowly defined measures of student performance. On the one hand, student achievement is the ultimate accountability measure for assessing any educational program. Yet over-reliance on standardized test scores as a measure of school and student progress exposes fledgling reform efforts to premature judgment and certain disappointment.

The BCI communities pursued and implemented a multi-faceted approach to measuring the progress of their initiatives. The districts and their partners made a commitment to collecting data not only on student outcomes but also on the speed, scale, and quality of implementation of specific priority components of the reform initiatives. Each community agreed to identify certain activities that it considered critical to implement, and then to benchmark progress in implementing them. Jobs for the Future and its partners believed this approach would give communities information they needed to adjust and improve their efforts on an ongoing basis.

Moreover, for measuring student outcomes, the BCI communities chose to look beyond standardized test scores. Instead, they sought to track the system's progress on a broad set of outcomes, starting with engagement indices (e.g., attendance and drop-out rates, student and teacher satisfaction) that would show improvement during the earlier stages of implementing a successful systemic education reform.

Performance measurement was central to the BCI effort, even though it challenged the capacity of the participating communities, and their ability and commitment to track implementation measures varied. Done consistently and effectively, the initiative's benchmarking component helped the partners in a community hold one another accountable for progress toward agreed-upon goals. It also helped focus the assessment of student outcomes not only on test scores but also on the initiative's ability to keep young people in school and learning. Benchmarking helped engage partners in understanding and tracking both the *process* and the *results* of reform.

• • • • •

Key Findings of the Benchmark Communities Initiative

These findings, and the others listed on the following pages and detailed in *From Innovative Programs to Systemic Education Reform*, offer hope for community-connected education reform—and a realistic assessment of the challenges facing such efforts. Jobs for the Future and the Benchmark Communities are optimistic that a broader dissemination of the initiative's findings will further the goals we set out to address: to improve young people's academic performance and to facilitate their transitions into postsecondary education and careers. And we believe that the lessons of the Benchmark Communities Initiative can spark new understanding and debate among proponents of systemic education reform of the potential and power of community-connected learning models as a vehicle for improving achievement and other outcomes for many young people in our nation's schools.

Revitalizing High Schools Through Systemic Education Reform

1. Concrete models of high school redesign are a critical factor in helping communities put reform principles into practice.
2. Evidence of institutional impact and improved student outcomes are as important for success as a compelling vision.
3. Definitions matter: for school-to-career to be a school reform strategy, it must be defined as a way to make community-connected learning a feature of all students' learning, not simply a means to modernize vocational education.
4. Both a high-level leadership body of key stakeholders and strong intermediary institutions are critical to the success of community-connected learning.
5. Specific policies and resources are required to make high school reform visible in the district agenda.
6. District and school-based entrepreneurs can influence district policy and practice to be more service-oriented in support of high school reform.
7. Long-term success requires the alignment of district standards, assessments, and promotion and graduation requirements to the principles of high school reform.
8. Schools are more likely to put new organizational structures and teaching practices in place when the accountability system supports and rewards such experimentation.

Learning Outside the Classroom: Work-based Learning in BCI Communities

1. Students participating in intensive, high-quality work-based learning programs compare favorably to peers on important student outcomes: student engagement and academic performance, high school graduation rates, and postsecondary attendance and completion.
2. There are significant, entrenched barriers to integrating academic and work-based learning across schools and workplaces, including the rigidity of school schedules, the heterogeneity of work placements, and the underdeveloped nature of school-employer information exchanges.
3. Communities have found ways to overcome these barriers and enhance the educational value of the work-based learning experiences. Promising strategies include: targeting quality work settings and experiences; negotiating work-based learning plans; integrating SCANS skills into district curricula and standards; and using senior projects and exhibitions.
4. Urban communities can create high-quality work-based learning programs at a scale that serves large numbers of students. To do so requires a staffed intermediary to organize employers, often along industry or occupational lines.
5. Providing work-based learning experiences is only one way that employers can contribute to systemic reform. Other important roles include: 1) organizing political and civic support for reform; and 2) providing direct support to the school system to encourage and promote quality teaching and learning.

Project-Based, Community-Connected Learning: Professional Development for Instructional Change

1. The focus on strengthening core academics in the four urban districts meant that project-based, contextual approaches became one means to that end, rather than a way to integrate real-world applications and SCANS skills into the curriculum.
2. The district that made the most progress in helping teachers meet the dual goal of rigor and relevance was a suburban community that focused its resources on long-term professional development in high-quality project-based learning.

Benchmarking: Setting Goals and Measuring Progress

1. Tailored to the local context, benchmarking can be a high-leverage strategy for driving systemic change.
2. Measuring progress in the implementation of reform practices helps to protect these practices in the early stages when outcome measurement would result in premature judgments of effectiveness.
3. The communities that made the most progress in systemic school-to-career reforms developed measurement strategies to document and measure the specific contribution of school-to-career approaches.

Introduction

From Innovative Programs to Systemic Education Reform documents the lessons of Jobs for the Future's Benchmark Communities Initiative, a five-year systemic education reform initiative launched in 1994. In collaboration with Jobs for the Future, five communities—Boston, Massachusetts; Louisville/Jefferson County, Kentucky; Milwaukee, Wisconsin; North Clackamas, Oregon; and Philadelphia, Pennsylvania—set out to develop and demonstrate effective approaches to improving young people's transitions into postsecondary education and careers.

The initiative was guided by two intertwined goals, one academic, the other focused on pathways to success after high school:

- **Improve academic performance:** Help all students achieve higher standards by teaching challenging subject matter in the context of solving real-world problems in the classroom, the community, and the workplace; and
- **Expand postsecondary education and career opportunities:** Improve young people's career prospects by mobilizing employers and other community allies to create structured pathways to higher education and high-skill employment.

The participating communities were united around a change strategy that saw reform at the school level as necessary but insufficient. BCI activities emphasized two other critical arenas for reform: district-level policies and practices and the relationship of employers and other community partners to schools and their students.

The Benchmark Communities Initiative evolved out of Jobs for the Future's experience with school-to-career programs, yet we were aware of skepticism among some education reformers of school-to-career's potential as a strategy for systemic education reform. Some thought that involvement in school-to-career programs distracted from learning time, while others viewed it as an upgrade of vocational education, with little relevance to the task of raising educational quality for all students. Still others noted that schools and districts often implemented school-to-career as an add-on program of career exploration, with little impact on the quality of teaching and learning.

The BCI communities saw it differently—and acted differently. In launching this initiative, each community approached school-to-career as a systemic reform—a powerful way to break out of the straightjacket of rules, structures, and priorities that make our nation's schools—and our high schools in particular—so resistant to change. In this view, school-to-career was characterized by experiential, integrated curricula and

teaching methods combined with the creative use of learning experiences outside the classroom. Thus, each BCI community made a commitment to work district-wide on policy and practice changes that could raise academic achievement *and* help young people expand their career prospects and horizons. All the partners believed that district-wide strategies combined with outreach to, and the engagement of, the business community and others outside the schools were critical to advancing the education reform agenda.

We believe that the lessons learned from the Benchmark Communities Initiative are important not just for proponents of school-to-career programs that have evolved in recent years, but for *any* comprehensive education reform effort. Several BCI communities are demonstrating promising results on measures of academic success and postsecondary attainment. And the lessons that have been learned about district-school collaborations, the characteristics of high-quality work-based learning, the challenges of professional development, and the power and complexities of data-based benchmarking efforts have value for all systemic reform initiatives.

The BCI Communities

Jobs for the Future designed the Benchmark Communities Initiative as a way to promote and test the viability of high-quality, district-wide school reform efforts in which school-to-career principles and strategies were central to—even the catalyst for—reform. To this end, we searched for and identified communities that had already embarked upon the path of building strong, indigenous school-to-career initiatives.

In selecting the BCI communities, Jobs for the Future engaged in an intensive, six-month-long process, beginning with a request-for-proposals and including visits to promising sites. The selection criteria centered on a community's capacity and willingness to move aggressively from isolated programs to an organized system that would promote the integration of work and learning for young people. Jobs for the Future asked applicants to demonstrate:

- The depth and breadth of support for the BCI's two primary goals among key community leaders;
- The capacity and commitment to implement an education reform agenda consonant with those goals;
- A core of influential employers participating in workplace learning programs;
- Economic and political conditions conducive to the expansion of workplace learning opportunities; and
- A credible plan to institutionalize and finance the scale-up of a district-wide school-to-career initiative.

Selected in June 1994, each of the five communities brought particular strengths to the initiative:

- **Boston** possessed a strong foundation in school-to-career, including: a well-established, respected compact among community partners to improve the education and economic opportunities for young people, a Private Industry Council with strong strategic vision and staff capacity to serve as an intermediary between schools and employers, and a school system with several good school-to-career programs.
- **Jefferson County**, which includes Louisville, benefited from Kentucky legislation mandating sweeping changes in pre-college education, district leadership committed to improving vocational education through greater integration of academics, and a business community heavily invested in the workforce development needs of the region.
- **Milwaukee's** district leadership had a clear vision of K-12 reform that was highly consonant with school-to-career principles, and a core of business and postsec-

The Benchmark Communities Demographic Information

	BOSTON	JEFFERSON COUNTY	MILWAUKEE	NORTH CLACKAMAS	PHILADELPHIA
Community Population	574,283	672,104	628,088	92,506	1,585,577
School Population	63,713	95,300	101,253	14,544	212,865
Ethnicity of School Population*					
African American	48.0%	32.7%	32.0%	1.6%	64.8%
Asian	8.8%	1.0%	1.2%	5.0%	4.8%
Latino/a	26.9%	1.1%	5.8%	4.7%	12.6%
White	14.9%	63.1%	59.0%	84.6%	17.6%
Other	0.4%	2.1%	1.0%	2.9%	0.2%

* totals may not equal 100% due to rounding

ondary institutions was well-versed in school-to-career concepts and ready to increase the scope of district-wide reforms.

- **North Clackamas**, the BCI's only suburban site, was poised to build on the statewide framework created by Oregon's educa-

tional reform legislation, its district leadership was committed to project-based and work-based learning as viable methods of developing knowledge and skills for college and careers, and its business community had a solid history of partnership with the district.

- **Philadelphia**, the largest BCI community, had embarked upon an ambitious K-12 district reform agenda, driven by the new school superintendent. This comprehensive effort to raise student achievement across the district emphasized smaller learning communities (including career academies), strong business involvement and support, and community- and work-based learning opportunities for large numbers of students.

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Implementing New Practices: BCI Expansion of School-to-Career Activities, 1993-1998

The BCI's benchmarking process helped define a common agenda across the five participating communities, and each community developed a measurement system that enabled it to: 1) track its own progress in implementing new practices; and 2) assess the impact of those practices on students. However, the use of benchmarking played out differently from site to site: measurement priorities reflected each community's reform priorities as well as its data collection systems and capacity. As a result, cross-site comparisons of this data are not always appropriate.

Boston • Massachusetts				
Whole School Change	93-94 Baseline	94-95 YEAR 1	96-97 YEAR 3	97-98 YEAR 4
Number of schools using school-to-career as whole school change strategy	0	3	21	23
Number of teachers participating in professional development on school-to-career instructional strategies	10	100	450	1,000
Employer/Community Partner Participation				
Number of employers providing intensive work-based learning placements	21	46	108	178
Student Participation				
Number of students participating in intensive, paid, work-based learning placements	200	300	600	772

Louisville/Jefferson County • Kentucky				
Whole School Change	93-94 Baseline	94-95 YEAR 1	96-97 YEAR 3	97-98 YEAR 4
Number of high schools using school-to-career as whole school change strategy	0	5	8	8
Number of teachers participating in intensive professional development on school-to-career instructional strategies	0	83	137	157
Employer/Community Partner Participation				
Number of employers providing work-based learning placements	0	100	227	536
Student Participation				
Number of students participating in substantial work-based learning (BCI schools only)	179	265	384	2,105

Milwaukee • Wisconsin

Whole School Change	93-94 Baseline	94-95 YEAR 1	96-97 YEAR 3	97-98 YEAR 4
Number of schools using school-to-career as whole school change strategy	0	10	44	50
Number of teachers participating in professional development on school-to-career instructional strategies	0	460	2,176	570
Employer/Community Partner Participation				
Number of employers providing intensive work-based learning placements	60	60	175	597
Student Participation				
Number of high school students participating in substantial work-based learning	250	518	2,169	900

North Clackamas • Oregon

Whole School Change	93-94 Baseline	94-95 YEAR 1	96-97 YEAR 3	97-98 YEAR 4
Number of schools using school-to-career as whole school change strategy	0	0	6	6
Number of teachers participating in professional development on school-to-career instructional strategies	0	25	154	216
Employer/Community Partner Participation				
Number of employers providing intensive work-based learning placements	45	50	293	300
Student Participation				
Number of students participating in substantial work-based learning (BCI schools only)	50	61	575	911

Philadelphia • Pennsylvania

Whole School Change	93-94 Baseline	94-95 YEAR 1	96-97 YEAR 3	97-98 YEAR 4
Number of high schools implementing school-to-career school-wide in all of their small learning communities	0	2	11	15
Number of teachers participating in professional development on school-to-career instructional strategies	0	1,100	2,500	4,712
Employer/Community Partner Participation				
Number of employers providing intensive, paid, work-based learning placements	About 20	47	240	336
Student Participation				
Number of students participating in work-based learning placements	About 150	309	2,229	3,501

The BCI Strategies

In association with one another and Jobs for the Future, these "benchmark communities" undertook a formidable set of challenges: to restructure their educational systems, engage employers in promoting student learning inside and outside the classroom, and create institutions and policies that would link schools, postsecondary institutions, and employers in a coherent system. In initial group meetings, Jobs for the Future and its five partners reached agreement on strategies the communities would implement toward improving academic performance and expanding postsecondary education and career opportunities. Each of the five partners also signed on to a set of five-year goals, which were initially proposed by Jobs for the Future and then refined by the partners in the initiative's first year (see *Appendix, page 60*).

To move toward those goals, each district made a commitment to embark upon these four strategies:

- *Revitalize high schools through developing school-to-career into a primary vehicle for systemic reform*, including the adoption of new district-level policies and practices (e.g., school accountability systems and student assessments) that promote and support contextual approaches to teaching and learning and close relationships of schools with local employers and other community resources;
- *Expand learning opportunities for young people through involving employers and community institutions* in providing quality community-based and work-based learning experiences and expanding access to high-skill employment;
- *Infuse contextual, authentic approaches to learning* into academic instruction through professional development; and
- *Set clear performance goals*—benchmarks—and measure progress in implementing key practices and their impact on students.

These strategies guided the initiative. The four chapters of this report distill key lessons from the experience of these communities as they tried to implement each of these challenging and very ambitious strategies.

Accelerating Community Change: The Role of Jobs for the Future

Given ambitious goals and limited resources, Jobs for the Future knew it had to work with communities that were already invested in these strategies for achieving systemic change. We also knew that part of Jobs for the Future's task was to target high-leverage change activities that could help the districts implement and expand their efforts more rapidly. To this end, we concentrated our support for the Benchmark Communities on a defined set of activities:

- Leadership development to identify and support entrepreneurs;
- Peer learning to build trust and tap implementation expertise of innovators;
- Benchmarking to set clear goals and measure progress; and
- Professional development to support practitioners in project-based learning.

Leadership development: Jobs for the Future and its partners designated and helped empower specific individuals in schools, district offices, and the community to act as entrepreneurial change agents who could move the BCI agenda within their institutions and with key allies. Comprehensive education reform requires entrepreneurs and friends at different levels within and outside the schools—in individual buildings, at the district level, and among allies and other interests in the broader community.

At the district level, a core group of staff must have the vision and savvy—and authority—to mobilize people and resources to support nascent reform practices in the schools. Likewise, at the school level, on-site organizers who enjoy the support of administrators and the trust of teachers can help orchestrate and lead school reorganization and pedagogical innovation. Outside the school system, reform requires brokers who can initiate and manage the complex process of business and community involvement.



As part of the BCI strategy, Jobs for the Future identified, worked with, and supported the work of such individuals across the participating communities. We did this through on-site planning and training, as well as through intersite meetings and other opportunities for leaders to work with one another and with people in similar positions in other communities.

Peer learning: In 1994, the BCI's vision of a comprehensive, district-wide

school-to-career system did not exist in its entirety in any of the five sites (or anywhere else). Rather, each of the BCI communities were exploring strategies for moving toward more systemic efforts, starting with program building. Jobs for the Future felt that the best way to accelerate change and strengthen these efforts was to create and nurture a support-and-learning community among the leaders and implementers in all the districts. We chose a peer learning network, augmented by expert practitioners, as the primary means of professional development for educators and their community partners as they worked to implement systemic reform.

Benchmarking: Using data to evaluate progress and improve performance was a central BCI strategy. It was also central to the role of Jobs for the Future as a support and catalyst for accelerating change. While most school districts collect massive amounts of data about students and school performance, schools rarely receive information they can use easily to pinpoint problems, identify weaknesses, and plan for improvement. Jobs for the Future believed that a focus on helping districts identify, collect, and analyze relevant data would help the partner communities focus on high-leverage investments and actions.

In our site work, we sought to advance the commitment and ability of districts to collect data on both the progress of implementation of school-to-career practices district-wide and the outcomes of this effort for students, especially those in high-intensity school-to-career programs. The BCI communities made a commitment to pursue data collection and assessment strategies that would measure district, school, partner, and student progress against the initiative's ambitious five-year goals.

The responsibility for data-collection design and implementation rested with each individual community, but across the districts, the benchmarking process guided planning, prioritization, and resource decisions. Jobs for the Future took responsibility for coaxing and supporting the districts to assess progress on a regular basis, benchmark progress against agreed-upon goals and past performance, and develop strategies for addressing areas of weakness identified by the process. Jobs for the Future developed benchmarking tools to facilitate the sites' efforts.

Professional development: All five BCI communities faced the question of how to substantially change the ways in which students learn and teachers teach. The challenge was to bring an expanded range of instructional strategies into the classroom. By the end of the BCI's first year, in each community, Jobs for the Future had begun to offer professional development in project-based learning to teachers affiliated with school-to-career programs or in schools using school-to-career as a reform strategy. In partnership with its national faculty of expert practitioners, Jobs for the Future delivered a structured sequence of professional development and coaching, directed at helping teachers design and implement challenging, community-connected projects.

Organization of this Report

From Innovative Programs to Systemic Education Reform presents key lessons that emerged from the Benchmark Communities Initiative as the partnering communities implemented the project's core strategies. Each chapter addresses lessons derived from one of the four strategies:

Revitalizing High Schools Through Systemic Reform (Chapter One) examines school-to-career's promise as a vehicle for systemic education reform. It examines factors that led the initiative to fulfill that promise in some BCI communities but not in others, and it explores the role of district policies and district leadership in propelling progress toward comprehensive reform. Because the models for "school-to-career" in its early stages were diverse and too-often ill-defined, districts that had clear design principles for school change, and that placed the BCI effort within the context of high-profile high school reforms, were more likely to progress toward the initiative's goals and produce measurable results.

Also critical to the effort were entrepreneurial leaders within the school district and the community. Every BCI district recognized the importance of aligning new standards, assessments, and graduation requirements to the educational vision and practices promoted by the initiative. Nevertheless, each one struggled with realizing this goal in practice.

Finally, Chapter One highlights the power of the BCI's inside/outside strategy: community leaders outside the school can reinforce and also apply pressure for acceleration and redirection of reform efforts inside the system.



Learning Outside the Classroom: Work-Based Learning in the BCI Communities (Chapter Two) discusses the relationship of quality work-based learning to student achievement: communities with significant work-based learning programs are demonstrating promising results in academic achievement and postsecondary outcomes. The chapter highlights challenges to the expansion of effective systems linking school-based and work-based learning, and it points to some strategies and practices that show promise for meeting those challenges.

Chapter Two suggests that the close integration of what is being learned in school and at the worksite is often difficult, but efforts to improve the quality of the work-based experience itself can have a significant payoff for participating students. The chapter concludes with a description of other roles that employers can play in

supporting quality work-based and school-based learning beyond the provision of work experiences for students.

Project-Based, Community-Connected Learning: Professional Development for Instructional Change (Chapter Three) explores dilemmas encountered by the BCI communities as they recognized the need for professional development investments to help teachers become comfortable and skilled in pedagogical strategies more in keeping with experiential, contextual teaching and learning. The chapter contrasts the success achieved by the BCI's one suburban community in promoting the widespread adoption of project-based, community-connected teaching strategies with the more limited results achieved in the large urban districts. The chapter concludes with a discussion of how the initiative redesigned its professional development strategy to address the particular challenges faced by urban education systems engaged in fundamental reform.

Benchmarking: Setting Goals and Measuring Progress (Chapter Four) outlines the process undertaken by the BCI communities to keep their reform efforts on track. It argues that benchmarking strategies were better elaborated in the communities that made more progress. By emphasizing accountability among the key stakeholders in a district's efforts, the benchmarking of key data can expand support from district and community leaders concerned about student outcomes. It can also buy time in the early stages of implementation by demonstrating progress on implementation measures when it is premature to analyze student outcomes from new programs or systemic innovations.

Revitalizing High Schools Through Systemic Reform

BCI Strategy: Revitalize high schools through developing school-to-career into a primary vehicle for systemic reform, including the adoption of new district-level policies and practices (e.g., school accountability systems and student assessments) that promote and support contextual approaches to teaching and learning and close relationships of schools with local employers and other community resources.

The Benchmark Communities Initiative created opportunities to restructure comprehensive high schools, using school-to-career as a primary vehicle for broad education reform. This chapter examines critical factors that help explain why school-to-career took hold as a systemic high school reform strategy in three of the five participating communities but not in the other two. The contrasts between these sets of communities provide valuable lessons not only for school-to-career but also for standards-based reform—and, indeed for any comprehensive attempt to promote deep, systemic reform in our high schools.

Community Connected Learning: A Design for Systemic Reform

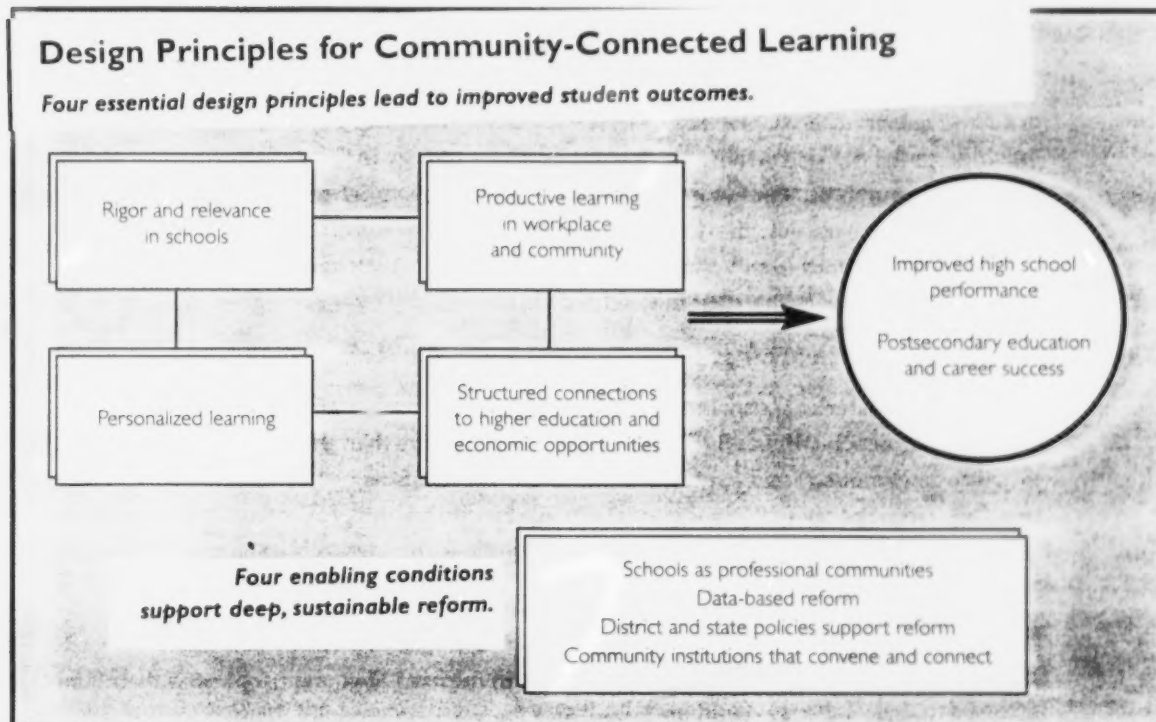
The history of school reform offers occasional examples of programs, sometimes whole schools, in which students achieve far more than their peers from comparable backgrounds and educational histories. Yet it is also a history of failures to advance from change within individual schools toward meaningful, district-wide reform or to sustain reform through changes in school or district leadership.

The Benchmark Communities Initiative began with an hypothesis: a key reason for the failure of systemic change could be found in the insularity of schools—their disconnection from important institutions in the lives of young people and their families. The wall between the school and the larger community deprives students of important sources of motivation and of adult networks that could help them succeed; the same wall deprives schools of key political allies who could help protect and sustain reform.

Over the course of the initiative, that hypothesis helped shape a set of design principles that the BCI communities believed would lead to improved student outcomes, as well as to a set of enabling conditions that would support deep, sustainable reform. While several of the design principles overlap with those of other school reform initiatives, the emphasis on productive learning beyond the classroom and structured connections to higher education and economic opportunities implies significantly tighter connections among the schools, employers, and postsecondary institutions.

These design principles for community-connected learning are:

- **Rigor and relevance in schools:** All students engage in intellectually challenging and relevant studies, receiving the support they need to perform to high standards. Students prepare to enter and advance in higher education and high-skill careers through: applying knowledge and thinking skills to authentic problems, using technology proficiently, and meeting real-world standards of quality.
- **Productive learning in workplace and community:** Learning extends beyond the classroom to the adult world of work and community activity. Through immersion in an adult milieu, young people develop skills and knowledge and create products of value beyond the classroom.



- **Personalized learning:** Learning takes place in small communities of teachers and learners. Everyone feels a sense of belonging, and there is a unique identity, curricular focus, and sense of purpose. Students get to know and be known well by at least one adult through advisory groups, mentoring, and project work.
- **Structured connections to higher education and economic opportunities:** Employer and higher education partners collaborate with schools to enable students to experience the demands of college and high-performance workplaces and to build relationships that increase access to higher education and career-ladder employment.

The enabling conditions for community-connected learning are:

- **Schools as professional communities:** As participants in a professional community, teachers engage in continuous improvement and renewal and participate in decisions that affect teaching and learning. They meet regularly to reflect on student work and their own practice, as well as to design curricula, collaborate on projects, plan ongoing professional development, and share effective practices.
- **Data-based reform:** Community-connected learning entails changes in the district office and in the community as well as in the school. At the community level, stakeholders use data to connect policies, practices, and results, while schools use input from and provide performance data to parents, students, teachers, and community partners. Student performance is assessed through multiple measures of engagement, achievement, and postsecondary outcomes.
- **District and state policies support reform:** Districts promote and support a community-wide focus on productive learning environments for adolescents. Districts build the capacity of schools to: innovate and be accountable, align resources and policies in ways that support community-connected learning, and develop active partnerships with business, higher education, and community stakeholders.
- **Community institutions that convene and connect:** Organizations that have the respect of employers, schools, and other community stakeholders play a convening and connecting role. These intermediary organizations help schools and their partners sustain momentum for reform and for quality learning programs. They also do the day-to-day work of connecting young people with work-based learning opportunities outside the schools.

Boston, Philadelphia, and North Clackamas made substantial progress in putting these principles into action as a cornerstone of district-wide school reform.

- **Boston:** Beginning in 1991 with the creation of ProTech as a small youth apprenticeship program, Boston's school-to-career effort has grown from a pilot on the system's fringes to a focus for whole school change in a majority of the city's high schools. A district-wide high school restructuring plan enabled school-to-career to evolve into an engine for transforming comprehensive high schools into small, personalized career pathways—with broad career themes as the context for academic learning—and developing classroom practices that support rigorous project-based teaching and learning. The first five schools selected to take the lead in restructuring all chose school-to-career as their reform model; thus far, 11 of Boston's 16 comprehensive high schools have begun to incorporate career pathways and other school-to-career features as central elements of their redesign.
- **Philadelphia:** From its start in 1992 as a manufacturing apprenticeship program for 12 students, school-to-career has become a central element of *Children Achieving*, Philadelphia's district reform plan. A pioneer in developing career

academies. Philadelphia navigated the transformation of school-to-career from a successful program into a seminal strategy for broad district reform. This began with the arrival of a new superintendent committed to district-wide reform. *Children Achieving* provided the impetus to reorganize the district's schools into 22 clusters—each with a comprehensive high school and feeder elementary and middle schools—and to restructure all high schools into small learning communities. By the fall of 1997, 15 clusters had adopted school-to-career principles and instructional practices as a vehicle for reforming all schools, and over 90 of the 135 small learning communities had selected school-to-career as their instructional framework.

- *North Clackamas*: District leaders in this suburban community faced some challenges in bringing school-to-career principles to the fore, not the least of which was a preconception among some parents and teachers that school-to-career was vocational education. At the same time, reform leaders realized the potential of the state's strong commitment to career-related learning; in particular, the state education reform emphasized reorganizing the last two years of high school around focused programs of study and career-related learning experiences. They decided to create a systemic planning process that would enable them to implement these aspects of state education reform district-wide, rather than in one or two pilot sites. A broad-based School-to-Careers Task Force laid the foundation for this process, followed by a Graduation Task Force, which developed a new set of graduation requirements that emphasized both rigor and relevance. Central to the district plan was a professional development initiative in project-based, community-connected learning. In 1995-96, this began as a modest set of workshops for 25 teachers, taught by a Jobs for the Future consultant; it evolved into the cornerstone of a district-wide reform effort to link what students learn in school with the real world. Over one-third of the district's teachers have participated in the training, which takes place over two years.

While Boston, Philadelphia, and North Clackamas face difficult challenges, in achieving district-wide results—both in program quality and student outcomes—progress has been significant. The reform process is deeply embedded, with strong district, employer, and community support. Based on measurable goals and data, reform leaders understand how far the process has come and how far it still needs to go. They have established a strong foundation for continuous improvement. And there is a community commitment to stay the course.

In contrast, district support for school-to-career lessened in Louisville and Milwaukee over the course of the initiative. While teachers in these two communities have sustained key school-to-career practices in some programs and classrooms, school-to-career has not evolved into a district-wide framework for education reform for students of all performance levels and postsecondary goals.

School-to-Career and Systemic Education Reform

Findings from the BCI Communities

1. Concrete models of high school redesign are a critical factor in helping communities put reform principles into practice.
2. Evidence of institutional impact and improved student outcomes are as important for success as a compelling vision.
3. Definitions matter: for school-to-career to be a school reform strategy, it must be defined as a way to make community-connected learning a feature of all students' learning, not simply as a means to modernize vocational education.
4. Both a high-level leadership body of key stakeholders and strong intermediary institutions are critical to the success of community-connected learning.
5. Specific policies and resources are required to make high school reform visible in the district agenda.
6. District and school-based entrepreneurs can influence district policy and practice to be more service-oriented in support of high school reform.
7. Long-term success requires the alignment of district standards, assessments, and promotion and graduation requirements to the principles of high school reform. This has proved far easier to do on paper than in practice.
8. Schools are more likely to put new organizational structures and teaching practices in place when their districts' accountability system supports and rewards such experimentation.

Finding 1:

Concrete models of high school redesign are a critical factor in helping communities put reform principles into practice.

One key reason why school-to-career took hold as a systemic reform strategy only in some communities had to do with the ability of the reform leaders to translate it into concrete models of high school redesign and pedagogy.

- **Philadelphia and Boston:** Reform leaders in these cities defined school-to-career in terms of three key design elements: 1) career pathways, academies, or majors that provide a more focused, relevant, and personalized educational experience; 2) contextual learning tied to high standards and a broader set of competencies than those offered in traditional academics; and 3) intensive work-based and community-based learning

experiences with explicit learning goals. When the Boston Public Schools asked high schools to submit plans for implementing district restructuring principles, most school teams turned to school-to-career models—not because they were required to do so but because these models offered a concrete way to put the district principles into practice (e.g., small, personalized learning communities and inquiry-based instruction).

- *North Clackamas*: Reform leaders gained traction for school-to-career by building upon some teachers' interest in pedagogical approaches that would be more intellectually challenging and engaging than traditional teaching methods. The BCI's focus on rigor and relevance through contextual, project-based learning offered an attractive pedagogical approach, as well as a coherent two-year professional development sequence to help teachers incorporate new strategies into classroom practice. The success and enthusiasm generated by the first rounds of training sparked much wider interest in project-based instruction. Within four years, over a third of the district faculty (in elementary, middle, and high schools) had participated in this initiative. From their experience creating contextualized learning projects, participating high school teachers gained a concrete sense of what it takes to implement focused programs of study for juniors and seniors and career-related learning experiences—two aspects of Oregon's Certificate of Advanced Mastery being piloted by the North Clackamas district.



- *Milwaukee*: Early in the BCI, Milwaukee's educational reform agenda focused on transforming teaching—both curriculum content and instructional methods—and the district adopted school-to-career as an overarching concept to describe what good teaching and learning look like. Grouped under this umbrella were authentic assessments of student work; the use of hands-on, inquiry-based teaching methods; rigorous standards for all students; more personalized, family-

like learning environments; interdisciplinary instruction; and an emphasis on cross-cutting competencies. The district seemed positioned to move forward in terms of the kinds of organizational and structural reforms being undertaken by Boston and Philadelphia and in terms of the close attention to practice exemplified by North Clackamas.

However, school-to-career in Milwaukee never moved from a set of principles into clear models of organizational or curricular redesign. While Milwaukee provided the most intellectually coherent and holistic conception of school-to-career among the BCI communities, the district left schools to their own devices in determining what school-to-career principles to put into practice. Particularly in the high schools, the vagueness of the charge made it difficult for the bold ideas of the Milwaukee reform experiment to take root. The reform efforts were more successful in the elementary and middle schools, where the progressive principles espoused by the district's school-to-career initiative provided significant encouragement for K-8 educators to adopt project-based learning.

- *Jefferson County:* School-to-career never gained a clear identity or focus beyond its origins as a strategy to modernize vocational education. Although district leaders promoted school-to-career as a viable educational philosophy and a potential strategy for high school redesign, they did not offer a concrete roadmap for implementing it on a whole school basis. Greatest involvement was evident in the elementary schools that embraced school-to-career philosophy by establishing school-based enterprises, expanding career fairs, and deepening parental involvement. However, only one of eight high schools participating in the BCI adopted school-to-career as its whole school reform strategy; the others implemented particular elements.

One way Jefferson County district leaders tried to situate school-to-career as educationally relevant to all students was to define it as the teaching of applied learning or cross-cutting competencies, for example those described by the Secretary's Commission on Achieving Necessary Skills—known as the SCANS skills. These specify a set of skills and competencies that modern workplaces demand from all workers. They were developed in 1991 by a commission convened by the U.S. Secretary of Labor, with high-level membership representing business, labor, education, and government.

Finding 2:

Evidence of institutional impact and improved student outcomes is as important for success as a compelling vision.

The three BCI communities with the most concrete designs and program models understood that widespread acceptance and adoption of school-to-career required hard evidence of its effectiveness in changing schools and improving student outcomes. Following the BCI strategy, school-to-career advocates placed a high priority on documenting results and measuring impacts on student performance, student engagement, and postsecondary educational and career outcomes. A common feature of the initiative in Boston, Philadelphia, and North

Clackamas was an emphasis on measuring and documenting results. (*See Chapter Four for an analysis of the lessons learned from the focus on benchmarking.*)

These three communities invested substantial dollars and time in setting up new data systems, documenting school changes, and analyzing school-to-career's impact on student outcomes. In addition to conducting their own research to document impact, school-to-career leaders forged relationships with academic researchers. For example, researchers in Philadelphia and Boston documented that the combination of career-related small learning communities and intensive work-based learning improves student performance, engagement, and postsecondary outcomes. In North Clackamas, "action research," conducted by the teachers themselves, demonstrated that project-based, community-connected learning is an effective strategy to improve student achievement on state standards. (*See Chapter Two for research on the impact of work-based learning.*)

Finding 3:

Definitions matter: for school-to-career to be a school reform strategy, it must be defined as a way to make community-connected learning a feature of all students' learning, not simply as a means to modernize vocational education.

In many places across the country, school-to-career has captured the imagination of educators and the public because they perceive it as a means to improve the way schools prepare non-college-bound students to enter the workforce. As such, they consider school-to-career irrelevant to the growing majority of students who plan to attend college.

Jobs for the Future and its BCI partners were aware of the pitfalls associated with this narrow conception, and they were relentless in positioning school-to-career as a combination of a college-preparatory curriculum with career-relevant learning. At the same time, the initiative was careful not to promote a "one size fits all" approach to education that eliminated student interest or choice. The vision included room for students with well-formed vocational interests to concentrate more on advanced technical courses, either in high school or at a local college,

while allowing the majority students, whose plans or interests are less certain, to participate in career academies or pathway programs that offered academic subject matter in an engaging, applied manner. However, no matter what path students chose, they would engage in a college-preparatory program that defined rigor in part as the application of knowledge to new situations and the crafting of practical solutions to complex problems.

To a considerable degree, Boston, North Clackamas, and Philadelphia succeeded in this delicate task. They positioned school-to-career as a means to improve vocational education by replacing narrow and outdated offerings with more intellectually rigorous technical courses. Yet they also presented school-to-career as a more contextual, project-based way for all students to master academic content. In these communities, the school-to-career movement escaped the either/or trap: it was neither solely an approach to vocational education, nor solely a whole school redesign of learning.

This broad understanding of school-to-career did not take hold in Milwaukee or Louisville, where school-to-career failed to transcend the dichotomy between vocational and college-oriented studies.

- *Jefferson County:* Jobs for the Future selected Jefferson County for the BCI in part because of the district's remarkable success in modernizing vocational education. With broad support from the business community, Jefferson County had completely revamped its vocational programs in the late 1980s, replacing two-year vocational centers (which had been criticized for small enrollments and possible duplication of services) with broadly defined career magnet programs housed in comprehensive high schools, and it supported the magnets with new equipment, facilities, and curricula. With this foundation, the move toward whole school redesign based on career academies and integrated academic and technical instruction seemed well within reach, and this happened in a few schools. Yet the movement

to reorganize large high schools into smaller learning communities based on career-related themes did not become widespread. Instead, school-to-career never moved beyond its successful but limiting definition as better vocational education for some students.

- *Milwaukee:* Reform leaders feared that the public would see school-to-career as “dumbing down” the curriculum and emphasizing vocational training over scholarship. As a result, they bent over backwards to reinforce the message that school-to-career is synonymous with high standards and inquiry-based academic instruction for *all* students. While this message reinforced the principle that school-to-career is about delivering a rigorous, college-preparatory program, it was vague on what specifically school-to-career contributed to good teaching and learning, and it was silent on the issue of vocational education. There was no position on what should happen to vocational education or where it fit within the notion of high standards for all. Inadvertently, this strengthened the wall between academic and vocational instruction. Further, the lack of clarity about the role of vocational education and the desired relationship between academic and technical instruction left schools confused about district goals.

Finding 4:

Both a high-level leadership body of key stakeholders and strong intermediary institutions are critical to the success of community-connected learning.

A key BCI lesson is that support from stakeholders outside the schools makes it possible to sustain reform despite changes in superintendents, principals, or state policies; conversely, the absence of such support increases the vulnerability of reform efforts. Particularly in large districts, the need for business, community, and postsecondary education leaders to help stabilize and protect the long-term reform agenda can't be overstated. Turnover among superintendents, coupled with shifting political winds, threatens any sustained effort to improve the schools.

In Boston and Philadelphia, strong, well-organized employer and community support for reform has kept education reform on the public agenda for over a decade. Furthermore, school-to-career advocates in both cities harnessed general support for education reform into focused support for the BCI agenda. The formation of a leadership council or school-to-career steering committee brought together school, district, business, community, and higher education leaders to develop implementation strategies, establish goals, assess progress, and ensure mutual accountability for results. Without such a strategy, school-to-career is likely to devolve into a marginal career awareness program with little lasting impact on student outcomes.

Another critical factor in school-to-career's ability to grow into a credible, whole school reform strategy is the development of effective means to recruit large numbers of business and community partners. (See *Chapter Two* for more on this topic.) The BCI asked schools to become more permeable, open organizations in which learning would take place in collaboration with partners beyond traditional school boundaries. In exchange for schools' commitments to implement comprehensive redesign,

their new partners would provide substantial resources and supports, including work-based learning placements, mentors, and expanded postsecondary connections. If school-to-career advocates couldn't deliver their part of this bargain, schools had little incentive or reason to invest in the BCI change process.

Within the BCI communities, delivering on the promise of a vibrant school-community partnership that would sustain reform and connect schools and students with employers and the community required an effective infrastructure designed to perform this function. By experimenting with different models, the BCI communities found that this critical *intermediary function* can be performed by an organization outside the schools, as is the case of the Boston Private Industry Council. It can also be housed within the school district: in Philadelphia, the district's Office of Education for Employment has served as an intermediary institution. The EFE also recently helped launch the Philadelphia Youth Network, established in 1999 by the city's school-to-career partners to design and promote a broad youth development system for the city.

- **Boston:** Active business and community support, organized by the Private Industry Council, enabled school-to-career to develop into a successful program and grow significantly, despite weak attention from superintendents through the mid-1990s. A high level School-to-Career Steering Committee, convened by the PIC, has kept the attention of key community stakeholders on the viability of school-to-career as a systemic educational reform strategy. Central to the committee's work has been the development of benchmarks and measures for assessing progress toward the dual goals of improving student achievement and promoting high-quality work-based learning. As a result of this benchmarking strategy, the school-to-career movement has been sustained through two superintendent changes, a change from an elected school board to one appointed by the mayor, and the introduction of high-stakes state testing. (*See Chapter Four for more information on the benchmarking strategy.*)
- **Philadelphia:** In Philadelphia, too, the business community played a critical role in ensuring that support for a district-wide change strategy based on school-to-career principles and practices would be a factor in the selection of a new superintendent. Key leaders of the business community participated in the School-to-Career Leadership Group, convened by the Office of Education for Employment, which, from its position inside the school department, fulfilled the functions of an intermediary institution, linking schools to businesses and postsecondary institutions. As part of the School-to-Career Leadership Group, employers were also a significant factor in ensuring that the new, more reform-minded superintendent would recognize in school-to-career a well-positioned and attractive reform vehicle. (*See Chapter Two for more information on employer involvement in Philadelphia.*)
- **Milwaukee:** Strong business and community support for school-to-career reform was lacking in Milwaukee, and the selection of a new superintendent undid much of the progress that had been made. For some time, Milwaukee has been at the epicenter of the "school choice" movement, and influential segments of the business

community have put their weight behind vouchers and private alternatives as the best way to improve educational opportunity for young people.

Nevertheless, there was a moment when it appeared that Milwaukee's school district reform leaders would garner high-profile support for their agenda, and for school-to-career in particular. At the BCI's start, the city's newly appointed superintendent of schools appeared to be in a strong position to build a stabilizing base of support among business, government, and community leaders. However, opponents of the district's reform agenda gained control of the school board, the superintendent resigned, and it proved impossible to rally business and community leaders behind the administrators left behind to "fight the good fight."

Finding 5:

Specific policies and resources are required to make high school reform visible in the district agenda.

The BCI provides valuable lessons about the district role in promoting, supporting, and sustaining change—as well as ways in which districts can hinder reform. The BCI experience reinforces the observations by many educational reformers that high schools, particularly in large cities, are remarkably resistant to change. Reform-minded staff may nurture innovative programs or restructure departments, but rarely do they institute fundamental change. More often than not, ambitious

plans are thwarted by the realities of crisis management and a maze of intractable organizational practices.

Acutely aware of the odds against success, most high school administrators and faculty, displaying a healthy survival instinct, are reticent to dive into large-scale reforms without clear encouragement and support from the top. For schools paralyzed by past failures and lingering uncertainties, a "hands-off" policy by the central office is insufficient. Nor is it enough simply to remove bureaucratic obstacles. Rather, the district needs a well-constructed strategy to make high school reform highly visible in and central to the district agenda, with specific policies and specific, dedicated resources for moving that agenda.

The three communities that made the most progress elevated high school reform to center stage, and they coupled it with concrete principles that reinforced the BCI's organizational and teaching practices. This was instrumental in moving the agenda beyond a small number of schools; equally important was backing up rhetoric with dollars and technical assistance. Specifically, the initiative suggests how savvy entrepreneurs, within and outside the schools, can reshape district policy and practice to support high school reform. In that sense, the BCI tells an important, positive story about the role of district leadership in promoting change, along with observations about some of the policies and practices that appear to make a difference.

- **Boston:** The turning point came in 1997 with the launching of a high-profile, comprehensive initiative to reform the city's high schools. That initiative has required wall-to-wall changes in every high school based on a comprehensive reform framework reflecting the BCI vision of personalized, community-connected learning.

Within 18 months, most Boston high schools had begun reorganizing themselves into smaller learning communities that combine an academic focus with career-connected learning. Fueling the schools' commitment to push beyond surface change has been the investment of substantial private and school district dollars to support an extensive professional development package, including: new technology, business-community connections, math/science and literacy coaches in the high schools weekly, and training and technical assistance for school leadership teams.

- **Philadelphia:** While the push to break down Philadelphia's high schools into smaller, more personalized units preceded the BCI, the arrival of a new superintendent rejuvenated and elevated the high school reform agenda. Arriving a year after the BCI began, his *Children Achieving Agenda* made central the transformation of high schools into small, theme-based learning communities, and it also elevated the importance of work-based and community service learning.
- **North Clackamas:** State policy played a role in moving high school redesign onto center stage in North Clackamas. The Oregon Educational Act for the 21st Century called upon school districts to implement career-related learning standards and learning experiences for high school students. Through a competitive process, the state selected North Clackamas as a pilot site for the development of Certificate of Advanced Mastery programs in broad career areas. The district organized a task force to examine the implications of organizing the upper high school grades into theme-based majors, as well as reorganizing lower grades into more personalized units that could support interdisciplinary instruction. The task force recommendations promoted the BCI educational vision, while granting the three district high schools a great deal of local control over the redesign process. Significant district investment in a two-year professional development sequence in project-based instruction supported the redesign process. (See Chapter Three for more details.)

Finding 6:

District and school-based entrepreneurs can influence district policy and practice to be more service-oriented in support of high school reform.

In Boston, Philadelphia, and North Clackamas, supportive district policies did not simply reflect or result from a superintendent-initiated process. While receptive superintendents endorsed the school-to-career agenda, the impetus came from below. In large measure, district policies that helped reposition school-to-career as a primary vehicle for school improvement derived from advocacy within the central office, the schools, and the community.

Entrepreneurial leaders with the vision and savvy to mobilize people and resources to support nascent school-to-career practices made the difference. The school-to-career directors

and their staffs were particularly effective promoters of the BCI agenda, and they were instrumental in their districts' adoption of high school reform initiatives that promoted the BCI's school-to-career practices. In addition, they were pivotal in persuading other district leaders of the compatibility between school-to-career and standards-based reform, and of the practical value of pooling resources to help the schools.

Entrepreneurial building-level staff also played a pivotal role in selling these ideas to their peers and district leaders. In Boston, the schools that stepped in front to implement school-to-career on a whole school basis helped persuade their colleagues and the district of this approach's potential. North Clackamas administrators and faculty who participated in the early rounds of project-based professional development effectively promoted school-to-career ideas, presenting their students' work to colleagues, school board members, and central office administrators.

For innovations to succeed—or even get a fair try—schools need a friend downtown, someone cutting red tape and knocking down roadblocks. Schools also need someone who will help them locate good consultants, organize and finance professional development, and, in general, bring new resources to the table. In all five BCI communities, the school-to-career directors and their staffs played this entrepreneurial role, mobilizing people and resources on behalf of the change process. In the most successful districts, these directors were particularly effective in delivering the services and system supports that schools needed.

Finding 7:

Long-term success requires the alignment of district standards, assessments, and promotion and graduation requirements to the principles of high school reform.

This has proved far easier to do on paper than in practice.

The organizing efforts of school-to-career advocates within the district would have been less effective if they had flown in the face of other central-office dictates. Before trying a new approach, many school people look for a signal that a particular reform direction is compatible with major district policies and initiatives. In the current standards-based environment, the main way that districts (and, increasingly, states) signal their expectation is through new learning standards, assessments, and graduation requirements.

In the five BCI communities, school-to-career advocates succeeded in promoting the adoption of new learning standards that emphasized the use of academic knowledge in real-world settings and the acquisition of applied learning competencies (such as planning, communication, and design

skills) that high-performance workplaces value.

- **Philadelphia:** New district learning standards incorporated SCANS-type skills, such as the effective use of technology as a problem-solving tool. These cross-cutting competencies are presented as an important set of skills in their own right and also embedded within the academic standards. For example, mathematics standards ask students to solve problems by interpreting data and predicting outcomes, make decisions based on the information collected, and communicate clearly the reasoning used to obtain the results.
- **Milwaukee:** The content standards in its K-12 Teaching and Learning Goals explicitly supported the use of real-world contexts to motivate understanding of academic subject matter and emphasized mastery of broadly defined, interdisciplinary areas, such as communication, scientific reasoning, and responsible community membership. The city took the lead among BCI communities in pioneering

sophisticated assessment systems to measure such skills. For example, with assistance from researchers at Alverno College, the district developed an oral communications assessment to test students' speaking and presentation skills. The district also developed a math assessment that tested students' ability to apply basic mathematical concepts to real-world problems.

The adoption by districts of standards compatible with school-to-career's educational vision was important on a symbolic level: it gave schools permission to experiment with innovative teaching strategies and community-connected learning. However, on the practical, implementation level, the impact of new standards and assessments has been mixed. Most often, the endorsement of cross-cutting, high-performance skills and new, applied teaching approaches were additions to, not replacements for, traditional requirements. In many cases, higher standards mean that students must cover more topics in a subject area, even when the same standards might encourage a more thoughtful, inquiry-based approach. The mixed signals have overwhelmed many teachers.



Simultaneous district-level calls for more breadth and more depth might be resolved satisfactorily, but the overlay of new state standards and assessments has made this even more challenging. In state after state, attempts to define a core of knowledge that represents basic "academic mastery" have exploded into exhaustive lists of facts, formulas, skills, and competencies. In the inevitable political compromises, clashes between those who emphasize specific content knowledge and those who stress critical reasoning and the application of knowledge in varying contexts have often produced standards that try to be all

things to all people. A recent analysis by Robert J. Marzano and John S. Kendall estimates that it would take teachers and students as long as 22 years to cover adequately all the knowledge identified and tested in the standards for core subject areas.

As the experience of the BCI communities shows, the issue is not simply state standards but, even more importantly, state assessment systems. In many cases, performance-based standards and standardized assessments are mismatched. It is the high-stakes assessments to which teachers, schools, and districts are held accountable that prevail.

- *Kentucky:* Standards-based reform evolved from an alignment of performance-based standards and assessments to a mismatch between standards that emphasize problem-solving and other applied skills and high-stakes state tests that do not include "performance events" as part of the test. While continuing to emphasize performance tasks in recommended instructional and assessment practices, the state removed such tasks from its testing program because of concerns regarding reliability and validity of the results.

- **Boston:** Massachusetts was well along in the process of developing performance-based standards when a change in state leadership shifted the focus to high-stakes standardized tests that students must pass to graduate. The tests will become the sole measure to rank schools and districts and will drive state takeovers of low-performing schools. On paper, Boston still has a new graduation requirement that students prepare projects and products that demonstrate their ability to apply knowledge, but helping students pass the state tests has supplanted any serious efforts at implementing this portfolio approach.

In some BCI communities, new promotion and graduations requirements are also proving to be a doubled-edged sword. For example, Boston approved new requirements specifying 19 courses that students must pass to graduate. These requirements leave little room for electives that could help give an identity to the career- and theme-based small learning communities that schools are beginning to form for eleventh and twelfth graders. The district has yet to rule on whether electives combining academic and technical skills in the context of a career theme (e.g., pre-engineering) or interdisciplinary theme (e.g., urban studies) will fulfill any of the requirements for graduation.

Finding 8:

Schools are more likely to put new organizational structures and teaching practices in place when the accountability system supports and rewards such experimentation.

The BCI experience reveals both the importance and the complexity of implementing new ways to measure school progress. Many school accountability systems threaten sanctions for failure, but few reward the difficult—and risky—business of experimentation with new designs for learning. For example, it is rare for a school accountability system to recognize and reward schools for putting new practices in place, such as the creation of small learning communities or the introduction into classrooms of rigorous, inquiry-based instruction. Such changes usually go unrecognized unless they translate into immediate improvements on standardized test scores. For community-connected learning to take root, school systems need to hold schools to clear performance

standards while at the same time rewarding and supporting the efforts of those schools to make long-term investments in change.

- **Milwaukee:** While pioneering new assessments, the district began to move away from its reliance on standardized test scores as the sole measure of school progress. It began to pilot a new school accountability system that combined a small set of district measures (i.e., school performance on state and district assessments and student grades and attendance) with a set of school-determined measures and a more qualitative narrative that documented major school innovations and achievements. Although school-to-career is no longer central to Milwaukee's reform agenda, elements of the holistic system of measurement and accountability that the district was trying to achieve remain in place. For example, project-based learning, integrated learning, and community linkages are still among the evaluation criteria

in the accreditation of Milwaukee's schools. Evaluators look for evidence of teamwork, career exploration activities, the application of classroom learning to real-life situations, and the integration of curriculum from different subject areas.

- *Boston:* The 1998 high school restructuring plan renewed attention to the importance of measuring a school's progress in adopting key reform practices. Until that point, student scores on multiple-choice, standardized tests in reading and math were the primary measures of school performance. In the new system, Boston is implementing a more in-depth, quality review process in which a school prepares a portfolio of its work and presents evidence of progress to a district review team. However, the statewide emphasis on improving student performance on tests in the Massachusetts Comprehensive Assessment System may keep the focus on student scores rather than school practices and portfolios.

Remaining Challenges

In 1994, five communities came together around a mutual commitment to undertake systemic reforms that would help raise the level of all students' academic achievement and, at the same time, improve their career prospects. All five communities looked to the ideas and approaches emerging in the school-to-career movement as the basis for restructuring their comprehensive high schools and improving postsecondary economic and educational opportunities for young people.

Not surprisingly, all experienced the uneven pace associated with any ambitious systemic reform. Although several communities entered the new millennium with more momentum than the others, key stakeholders in all five remain committed to the original vision.

- *Jefferson County:* The co-chair of the Louisville Steering Committee, as part of the community's participation in BCI, became executive director of Greater Louisville, Inc., the metro chamber of commerce and the economic development arm for the Louisville community. He seeks to create a more conducive environment for entrepreneurial leadership around school-to-career and workforce development issues. Although it is too early to tell, this could have the effect of more rationally distributing the benefits of employer participation across the system (*see Chapter Two*). Central High School's numerous partnerships with employers demonstrate the potential benefit to schools of linking with powerful business partners. Central High's reputation and ability to draw students have been enhanced by its partnerships and the energy and programming these have brought to the school.
- *Milwaukee:* In the summer of 1999, turnover in the school board and the superintendency lent hope that the district-business community fissure will be repaired. Although it is too soon to tell what changes this will bring, performance-assessment and school-accountability systems continue to embody school-to-career principles, without using the language of school-to-career.

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- *Boston:* The School-to-Career Office works closely with the comprehensive high schools that have elected to emphasize community-connected learning in their small learning communities and career pathways. In those high schools, content (subject matter) coaches work with teachers to improve the rigor and relevance of curricula and instruction, fostering attention to both academic standards and career competencies. Coordinators of small learning communities use a benchmarking tool, designed with Jobs for the Future, to guide the development and implementation of key reform practices. The Boston Private Industry Council, the city's primary school-to-career intermediary, is focusing on continuing to enhance the quality and quantity of work-based learning by helping employers and teachers implement a work-based learning plan for every student.
 - *Philadelphia:* While the Office of Education for Employment continues to support the implementation of school-to-career as a key component of systemic education reform, many of its intermediary responsibilities are shifting to the Philadelphia Youth Network. In 1999, EFE and a number of school-to-career partners created this new non-profit organization as an umbrella entity to coordinate youth development activities across the city. The Youth Network will leverage, broker, and align the city's various resources so that a single set of priorities, focusing on student achievement leading to career success, governs the delivery of all youth services. The school system is organized into 22 clusters, each with a high school and its feeder schools; each cluster has a local resource board charged with mobilizing resources to meet cluster needs, including the development of work-based learning opportunities for high school students.
 - *North Clackamas:* Building on the BCI's dual focus on academic performance and postsecondary opportunities, North Clackamas is preparing to be one of the first districts to implement the Career-Related Learning Standards and Learning Experiences called for in Oregon's school reform legislation. Starting in the 2000-2001 school year (four years before the state requirement), the district will reorganize the junior and senior years into six focused programs of study (specified in the act as Arts and Communications, Business and Management, Health Services, Human Resources, Industrial and Engineering Systems, and Natural Resources). Building on the BCI's professional development in project-based and contextual learning, the district is focusing on helping teachers: infuse career-related learning standards into curricula, instruction, and assessment; expand and improve contextual learning; and develop high-quality, career-related learning experiences.

With much of the groundwork for systemic reform in place, Boston, Philadelphia, and North Clackamas are facing second-generation challenges that will require as much attention and entrepreneurial energy as did the initial stages of the reforms. These challenges include:

- Moving from a few exemplary pathways within a school to "wall-to-wall" pathways;

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- Providing high-quality career-related or work-based learning experiences at sufficient scale;
 - Addressing potential incompatibilities among new state assessments, local graduation requirements, and the focus on real-world, contextual, connected learning;
 - Finding or developing rigorous and relevant curricular materials (for example, for use in multidisciplinary career pathway courses); and
 - Striving for coherence of multiple reform initiatives.

The first rounds of systemic reform in these three very different communities have provided valuable lessons for others engaged in meaningful, large-scale school change. The ways in which the communities handle these new challenges also promises to be fertile ground for learning key lessons about educational reform.

Learning Outside the Classroom: Work-based Learning in BCI Communities

BCI Strategy: Expand learning opportunities for young people through involving employers and community institutions in providing quality community-based and work-based learning experiences and expanding access to high-skill employment

All five BCI communities began with a core commitment to making work-based learning—experiences outside the classroom, in workplaces and the community—central to their education reform strategies. They felt that a significant expansion of work-based learning programs and their integration with academic programs could motivate students and teachers, better focus students on the future, and help many young people develop skills that can be difficult to impart in the peer-oriented culture of a high school classroom.

The BCI communities chose a difficult path and they knew it. Building upon relatively small programs with work-based components, each district signed on to goals that emphasized the growth of such efforts district-wide and to a level of quality that could contribute to, even accelerate, gains in academic achievement.

During the course of the initiative, the five communities became laboratories for addressing frequently asked questions about work-based learning initiatives in American school systems. These included:

- Can districts secure enough workplace experiences to enable significant program expansion?
- Can the quality of work-based learning experiences be high enough to provide students with learning-rich opportunities?
- Do measurable results justify the effort required to build and sustain the required network of community connections?
- What local institutional structures are needed to organize and sustain these school-community relationships?

The BCI experience shed light on these issues, with the most hopeful data emerging from the communities that went furthest toward systemically integrating work-based learning into the high school reform agenda. Several communities have shown promising results related to academic performance and to postsecondary education and career outcomes for students in intensive work-based learning initiatives. Nor has finding placements in workplaces and the community seriously limited expansion. BCI communities found they can improve quality through a well-designed process of selecting employers and other sites for work-based learning and through attention to the structure and expectations of the learning experiences. Finally, the BCI communities found ways to simplify and target employer involvement, making it easier to sustain and manage.

Learning Outside the Classroom

Findings from the BCI Communities

1. Students participating in intensive, high-quality work-based learning programs compare favorably to peers on important student outcomes: student engagement and academic performance, high school graduation rates, and postsecondary attendance and completion.
2. There are significant, entrenched barriers to integrating academic and work-based learning across schools and workplaces, including the rigidity of school schedules, the heterogeneity of work placements, and the underdeveloped nature of school-employer information exchanges.
3. Communities have found ways to overcome these barriers and enhance the educational value of the work-based learning experiences. Promising strategies include: targeting quality work settings and experiences; negotiating work-based learning plans; integrating SCANS skills into district curricula and standards; and using senior projects and exhibitions.
4. Urban communities can create high-quality, work-based learning programs at a scale that serves large numbers of students. To do so requires a staffed intermediary to organize employers, often along industry or occupational lines.
5. Providing work-based learning experiences is only one way that employers can contribute to systemic reform. Other important roles include: 1) organizing political and civic support for reform; and 2) providing direct support to the school system to encourage and promote quality teaching and learning.

Finding 1:

Students participating in intensive, high-quality work-based learning programs compare favorably to peers on important student outcomes: student engagement and academic performance, high school graduation rates, and postsecondary attendance and completion.

The BCI experience demonstrates that initiatives with strong work-based learning components can benefit students. These work-based experiences promote student success by:

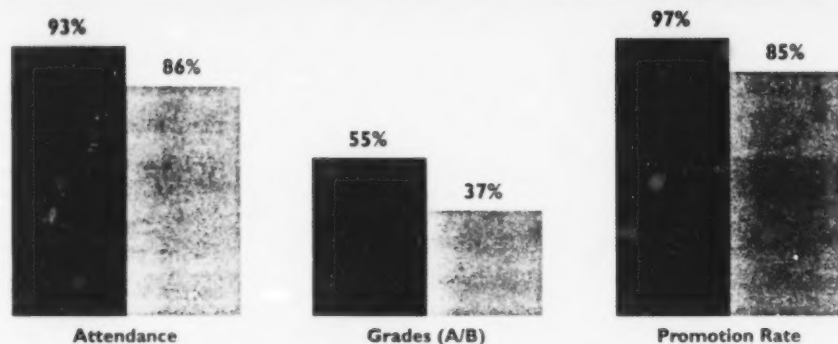
- Linking students with caring adults outside the school who support and challenge them to meet adult expectations and behaviors;
- Providing opportunities for "reality-testing" about different work settings and career options that do not come from casual observation (e.g., job shadowing);
- Helping students learn to navigate the modern workplace and demonstrate capacities to adults who can help them advance; and
- Providing an authentic context for teaching habits of perseverance, personal responsibility, and resourcefulness, because

students must produce for adults who expect and depend upon their ability to deliver quality work.

In the BCI communities that were most aggressive in developing large numbers of work-based learning opportunities, the participating students experienced improvements in outcomes directly related to academic success, including grades and college attendance and retention. Students who took part in work-based learning experiences also benefited from higher earnings.

- **Boston:** Students in school-to-career programs with a work-based component compare favorably to peers on attendance, high school dropout rate, grades, and promotion rates, according to a recent study conducted by the Boston Private Industry Council, with assistance from Jobs for the Future and the Boston Public Schools. Participants in these programs also appear to enjoy more success in college and in

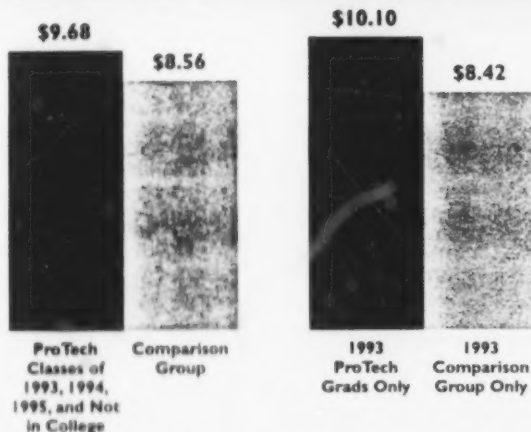
Boston • School-to-Career Outcomes • 1997-1998 School Year



■ 11th and 12th grade students actively participating in ProTech or an Academy program
 □ Other 11th and 12th grade students

Source: Office of Research, Assessment, and Evaluation. 1998. *School-to-Career Report: SY 1997-1998*. Boston: Boston Public Schools.

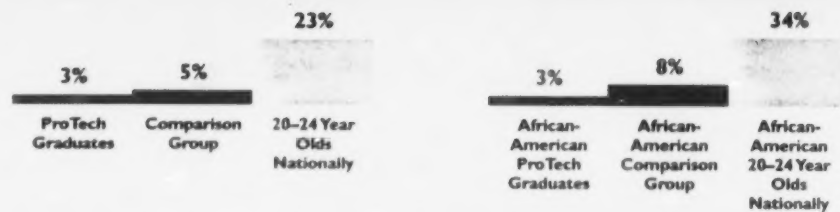
Boston • Working High School Graduates Mean Hourly Wages • June 1997



Source: Jobs for the Future. May 1998. "School-to-Career Initiative Demonstrates Significant Impact on Young People." Press release.

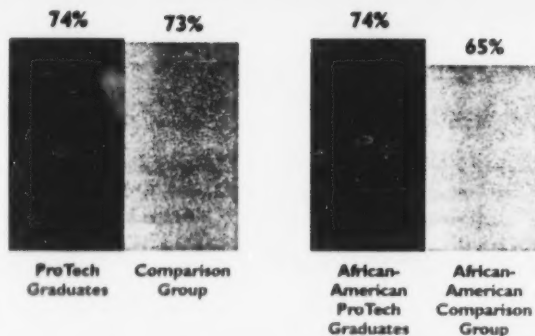
the labor market. This study surveyed graduates of ProTech, the city's most intensive work-based learning program. It also found that a higher percentage of ProTech graduates were attending a postsecondary program the fall after graduation than their peers who graduated from Boston high schools. The effects were most pronounced for African-American students: the fall after graduating, 79 percent of African-American ProTech graduates were enrolled in postsecondary education compared with 53 percent of African-American comparison group students. College retention and completion rates were also significantly higher for African-American ProTech graduates. Seventy-three percent of African-American ProTech students who

Boston • Percent of High School Graduates Who Are Not Employed or in School • June 1997



Source: Jobs for the Future. May 1998. "School-to-Career Initiative Demonstrates Significant Impact on Young People." Press release.

Boston • Percent of ProTech Graduates Who Are Likely to Earn a Postsecondary Degree or Certificate • June 1997

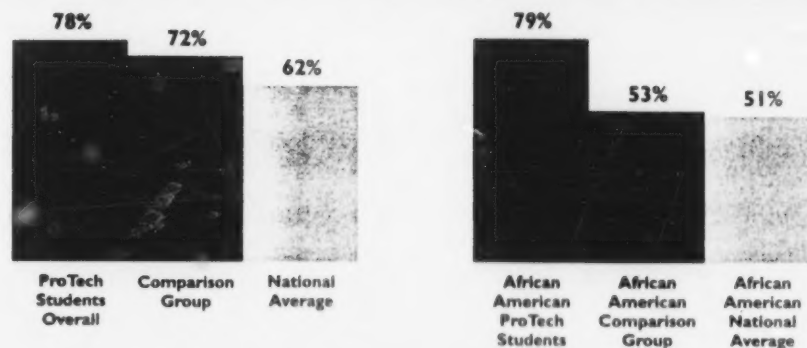


Source: Jobs for the Future. May 1998. "School-to-Career Initiative Demonstrates Significant Impact on Young People." Press release.

graduated high school in the years 1993, 1994, and 1995 were still enrolled in college or had completed a degree when surveyed in the winter of 1997, compared to 65 percent of their peers.

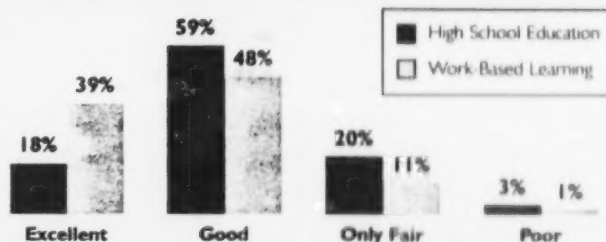
According to the study, students also appear to earn higher wages as a result of participation in work-based learning programs. Among graduates who were no longer attending college (and thus fully invested in finding a good job), ProTech participants were earning significantly more per hour than a comparison group of students several months after graduation (\$9.86 versus \$8.57).

Boston • Percent of Youth Who Are Attending College the Year After Graduating from High School • June 1997



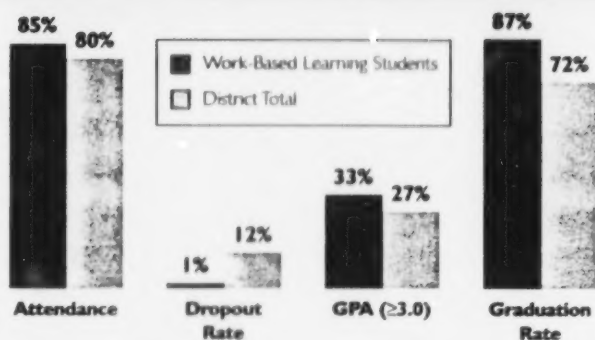
Source: Jobs for the Future. May 1998. "School-to-Career Initiative Demonstrates Significant Impact on Young People." Press release.

Philadelphia • Ratings by 1997 Graduates of the Overall Quality of Their Work-Based Learning Experiences and Their High School Education



Source: Madonna Yost Opinion Research, March 1999, "Work-Based Learning Alumni Survey: Summary of Findings." Research report.

Philadelphia • Work-Based Learning Outcomes—1997-98 School Year



Source: School District of Philadelphia, n.d., "Work-Based Learning (WBL): 1997-98 Performance Statistics," http://www.phila.k12.pa.us/offices/ed_employ/Phila.stc.wbl/results.html

- **Philadelphia:** Results from several studies conducted by the School District of Philadelphia and outside evaluators point to measurable gains associated with the city's school-to-career approach, especially its work-based learning program. For example, Drexel University Professor Frank Linnehan found that participation in the work-based learning program significantly improved a student's grade point average and attendance. These effects were found after controlling for the influence of students' prior grades, attendance, year in school, and school attended. Participation in work-based learning had particularly beneficial effects for students who were more exposed to negative peer influences. The mentoring provided by workplace adults as well as the tangible rewards for hard work appear to be important counterweights to destructive peer cultures that discourage effort and academic achievement.

A telephone survey of graduates conducted by an opinion research firm illustrated how students perceived the benefits of work-based learning.

Students who participated in work-based learning were more satisfied with the employment they received in high school than students who did not participate. They also felt that the experience helped them land a job after graduating; 44 percent reported receiving job offers from the organization in which they received work-based learning experience.

Comparing all work-based learning students in the eleventh and twelfth grades with their peers city-wide, the district's data show higher attendance rates, lower drop-out rates, and better grades for work-based learning participants. The results are similar for work-based learning students in small learning communities in the comprehensive high schools, comparing the students with peers in the same small learning communities with similar grades and attendance but without work-based learning experiences.

Finding 2:

There are significant, entrenched barriers to integrating academic and work-based learning across schools and workplaces, including the rigidity of school schedules, the heterogeneity of work placements, and the underdeveloped nature of school-employer information exchanges.

All BCI communities have found it difficult to closely coordinate what is learned in the classroom and what can be learned at the workplace. Several obstacles present themselves:

- Forums and technologies for interaction between teachers and work site supervisors are often inadequate.
- Traditional high school scheduling makes it hard for teachers to leave the school building to connect with workplace learning sites.
- Student workplace experiences are typically so varied that it can be difficult for individual teachers to use those experiences as the basis for broadly relevant classroom lessons integrating workplace and classroom learning.
- Different conceptions among teachers and supervisors of what constitutes quality work and how to measure it hamper effective linkages between classroom and work-based learning.

Surveys of worksite supervisors and students participating in Boston's ProTech initiative—the city's most well-developed and intensive work-based learning program—reveals the difficulty of coordinating across the worlds of school and employment. In responding to Jobs for the Future/Boston Private Industry Council surveys, two-thirds of ProTech supervisors said they had a school-based contact, yet only 29 percent were aware of any courses linked to their students' work-based learning



experiences. Of the supervisors who were aware of curricular links, only 13 percent said that they collaborated with teachers on projects related to students' work experience. Similarly, students reported few formal opportunities to integrate work-based learning experiences in career pathway courses. More often than not, it is left to the participating students to connect workplace and school-based learning experiences.

For most high schools, the close integration of work-based learning with academic instruction requires an ambitious redesign of the organization and learning program, often involving schedule changes and flexibility, new roles for school staff, and structured collaboration within the school and between school personnel and their business and community partners. These changes are difficult to effect and require significant commitments of time, resources, and administrative leadership and support.

Finding 3:

Communities have found ways to overcome these barriers and enhance the educational value of the work-based learning experiences. Promising strategies include: targeting quality work settings and experiences; negotiating work-based learning plans; integrating SCANS skills into district curricula and standards; and using senior projects and exhibitions.

In the BCI's initial years, Jobs for the Future and its partners tended to judge the educational value of districts' work-based learning efforts largely by the extent to which schools integrated work activities with classroom instruction. As the initiative evolved, it became clear that it is also possible to promote and accelerate student learning by strengthening and enriching the educational experiences students have in the workplace itself—independent of the more complex changes in schedule and curriculum that close integration demands.

The BCI goals, agreed to by all five communities, emphasized the importance of work-based learning, not just worksite placements. The distinction is important. Without a conscious effort to make work experiences into richer learning experiences, quality is bound to be uneven and frequently disappointing. Employers, supervisors, and mentors are not educators, and few have significant experience with strategies for supporting young people as learners. Moreover, the typical business does not function as a high-performing learning organization. For many employers, deepening their capacity to provide powerful learning experiences for students would require significant internal organizational change and training.

One way the BCI sites addressed this challenge was by targeting program expansion to those work settings and jobs that were relatively learning-intensive, with opportunities for students to perform challenging, complex tasks. A growing body of research has found that school-supervised workplace placements tend to offer better learning opportunities than traditional youth jobs because of the commitment of most program staff to seek out learning-rich experiences for participating students. To cultivate learning-rich placements, several BCI communities primarily recruited "high-end" employers—including hospitals, law firms, financial services companies, and social service agencies—that are typically beyond the reach of teenage workers.

Several BCI communities enhanced the quality of students' work experience through advance planning and support for the worksite personnel who supervise and mentor students. In Boston and Philadelphia, school and business partners identified and codified explicit learning goals that emphasize generic or cross-cutting workplace skills. They then developed tools for simplifying and standardizing performance-based assessment by worksite supervisors. The work-based learning planning process in Philadelphia and Boston's development and use of a formal work-based learning plan put the spotlight on what students are expected to learn in their workplace experience—and on how well they are learning.

- **Philadelphia:** Workplace mentors, students, and placement specialists agree to an individualized learning plan for each student involved in work-based learning. This learning plan is used both to help design appropriate workplace learning

experiences and to assess student progress. Learning plans focus on helping students develop work-related competencies—such as teamwork, responsibility, initiative, and problem solving—that are specified in district learning standards.

- *Boston:* Work-based learning plans focus the development of workplace learning experiences and the assessment of student progress around core competencies developed jointly by the Boston Public Schools, employers, and the Private Industry Council. These competencies are: communication and literacy, organizing and analyzing information, problem solving, using technology, acting professionally, interacting with others, understanding all aspects of industry, and taking responsibility for career and life choices.

Boston students, supervisors, and career specialists collaboratively develop explicit learning goals that drive workplace learning opportunities, assessments of student progress, and continuous improvement in the quality of workplace learning. Using the plan can help an employer and student: identify the three to five competencies most critical to a student's tasks or projects, along with the level of complexity and difficulty required; use the initial assessment to collaboratively develop learning goals in agreed-upon competency areas; and identify strategies to help a young person move to higher levels of performance.

The 1998 survey of Boston employers confirms that work-based learning plans enhance internship quality. The survey found that Boston's work-based learning plan greatly increased the chance that employers would formally evaluate the students: 79 percent of students with plans were formally evaluated by their supervisors compared with 37 percent for those without plans.

After piloting in Boston, the state created and implemented a work-based learning plan for students engaged in school-to-career and other internships and work-based learning programs. The Massachusetts Work-Based Learning Plan now helps structure internships or connect classroom learning with work-based learning experiences for more than 10,000 youth across the state.

The strategies used by BCI communities to enhance worksite learning can make a difference. Based on supervisor reports of skills used by Boston students on the job, Jobs for the Future researchers found that more than 80 percent of the placements required students to use several important SCANS skills. Still, developing high-quality work placements remains a challenge. The same survey classified only 25 percent of student placements as high-end (that is, requiring students to make independent judgments and use more complex communication skills on a regular basis).

While the BCI experience is particularly instructive on strategies to improve the quality of the workplace experiences with minimal coordination to classroom learning and curricula, BCI communities have tried coordinating school and workplace learning in two additional and important ways. One is to incorporate the cross-cutting SCANS skills (generic or employability skills) into district standards. Philadelphia has gone the farthest in this direction:

- *Philadelphia:* In addition to high academic standards in core content areas, the Philadelphia school district adopted standards that include a set of cross-cutting competencies in problem solving, communication, multiculturalism, technology, citizenship, and school-to-career. The school-to-career competencies include the abilities to: effectively plan and organize resources to produce a product or service; work effectively with others and in teams; apply current technology; understand workplace organization; understand career options; and integrate activities outside the classroom with academic learning. The work-based learning agreement developed in Philadelphia uses the district's cross-cutting school-to-career competencies as the framework for workplace learning, and it involves parents, teachers, students, and employers in the process of creating individualized learning plans.

A second integration approach is to implement senior projects or exhibitions that require students to make connections and undertake research outside the classroom, in workplaces or other community institutions that can help them with their project. Typically, assessment is done by panels that include representatives of the employers or industries involved in the projects. Senior projects or exhibitions enable students to explicitly connect work and school learning. In most BCI communities, a few programs or schools have pursued this strategy. In North Clackamas, however, classroom-based, career-related exhibitions are becoming an important part of the high school experience of many juniors and seniors.

- *North Clackamas:* Senior projects are now a systematic, district-wide policy. They are required in this community and must be tied to a student's choice of pathway. In addition, the district is laying the groundwork to expand the provision of "career-related learning experiences" in 2000-2001 to juniors and seniors in 24 high school classrooms. These projects, being designed and developed during the current school year, will emphasize field-based research and incorporate and assess mastery of career-related learning standards specified by the district.

Finding 4:

Urban communities can create high-quality work-based learning programs at a scale that serves large numbers of students. To do so requires a staffed intermediary to organize employers, often along industry or occupational lines.

From the school-to-career movement's earliest days, economists and others assumed that difficulties in recruiting and retaining employers to provide jobs and work-based learning experiences for high school youth would limit the scale of district-wide efforts. However, research by Katherine Hughes at the Institute on Education and the Economy at Teachers College confirms the BCI experience: employer recruitment and retention are frequently less of a barrier to expansion than are student demand for certain career-related programs and school-based inflexibility in scheduling and resource deployment.

Particularly in cities, employer engagement does not appear to be a significant limiting factor in developing large numbers of

extended work-based learning opportunities. In fact, urban areas may enjoy an advantage in the number of interesting opportunities for outside-school learning, in businesses as well as in civic and community organizations. Compared to suburbs or rural areas, cities have public transportation systems that provide access to many employment opportunities within a relatively small geographic area, and large public and non-profit sectors offer additional opportunities for placements.

As noted in Chapter One, the key to expanding work-based learning, in city or suburb, is an infrastructure that promotes employer buy-in, strengthens the connections between schools and workplaces, provides ongoing direction and oversight, and establishes mutual accountability for quality and results. In both Boston and Philadelphia, that infrastructure includes two distinct entities: 1) a high-level leadership body made up of influential school district, business, higher education, and community leaders; and 2) an effective, staffed intermediary institution that does the day-to-day work of connecting schools, employers, and other community resources.

- **Boston:** A high-level School-to-Career Steering Committee convened by the Boston Private Industry Council engages school, business, public, and community leaders in providing and expanding quality work-based learning experiences for high school students. In addition, PIC staff members market school-to-career to employers and manage the ongoing relationships among young people, schools, and participating employers. This combination of political support and on-the-ground staff has enabled the community to move from a pilot to a comprehensive district-wide system of work-based learning in a few short years. From 1994 to 1998, the number of employers providing intensive work-based learning placements and mentoring grew from 21 to 178; the number of students participating in intensive workplace placements connected to academic instruction increased nearly four-fold.

Boston's key to sustained employer involvement is that employers appreciate the productivity and quality of the young people they employ, which is largely a function of the screening, orientation, and support students receive from career specialists working in Boston's school-to-career high schools. More than 80 percent of workplace supervisors rated their students as similar or superior to typical hires on skills ranging from productivity to job-related math and communication skills. Over 80 percent rated students' productivity as a benefit to their companies. Two-thirds saw student work-based placements as a way to develop a pool of qualified entry level employees. Employers involved with the intensive work-based learning model repeatedly pointed to better entry-level workers as the key reason behind their continued participation.

- **Philadelphia:** Two factors have driven the expansion of work-based learning: 1) the Philadelphia School District's commitment to comprehensive high school reform; and 2) the business community's concerns about the ability of the schools to produce graduates qualified to meet regional workforce needs. School-to-career has expanded from a limited effort to improve vocational education to an important part of the district's education reform strategy. The Office of Education for

Employment fulfills the intermediary function of building and expanding connections between schools and employers. Business participation in providing intensive work-based learning placements grew from 20 in 1994 to 336 in 1998, while the number of students participating in intensive, work-based learning grew from 150 to 3,501.

- **North Clackamas:** In North Clackamas, the school district office is part of a "networked" regional approach to employer recruitment. Instead of a separate intermediary organization to coordinate student placements, the district shares a computerized database of 3,000 employers with 30 local school districts. Day-to-day coordination is the responsibility of a full-time business recruiter. The Oregon Business Council and the North Clackamas Chamber of Commerce play important roles in professional development and in convening business partners.

Louisville is also an urban area with strong civic leadership, but, in contrast to Boston and Philadelphia, it has been slow to create an adequately staffed organization to undertake the day-to-day work of linking schools and employers. The lack of a strong, centralized means to recruit employers has challenged the expansion of work-based learning opportunities to large numbers of students across the district.

- **Jefferson County:** Louisville employers have a long, impressive history of involvement in, and leadership of, the governance and planning of school reforms. Few cities can boast of such consistent and thoughtful involvement, starting with the reform of vocational education in the 1980s and continuing through the state's innovative education legislation of the early 1990s. However, the community has struggled during much of the past decade to find an effective way to organize employer interests and facilitate ongoing employer participation in school-to-career.

In the late 1980s, inspired by the success of the Boston Compact, local political and business leaders rallied employer support behind a major work-based initiative for at-risk high school students. The result was the Louisville Education and Employment Partnership (LEEP), a successful business/schools partnership to support at-risk youth that combines counseling services, mentoring, and part-time and summer employment. The program serves over 1,000 students annually and has proved effective in improving attendance, academic performance, and employment outcomes, according to a rigorous third-party evaluation.

Through involvement in the BCI, Louisville school-to-career advocates sought to expand the business community's organized involvement in work-based learning beyond LEEP and the most at-risk students to the large number of students involved in the district's career-related programs.

Many individual companies stepped up their commitments significantly. United Parcel Service took the lead, increasing its programs from 30 to 400 students over the course of three years. The business community expanded its involvement in job shadowing days, and Louisville developed a successful teacher externship initiative, the Teacher/Business/Industry/Labor Exchange.

However, for various reasons, LEEP remained the community-wide initiative that the city's business institutions related to most systematically. Perhaps the reason there was deep support and impressive success. Perhaps it was the fluid institutional infrastructure within Louisville's business community during the BCI years.

During those years, confusing mandates and shifting employer and government strategies stymied several efforts to create an effective intermediary. For example, the mandates and activities overlapped between the state-created regional Local Labor Market Area 13 and the smaller Jefferson County school-to-career office. There was also significant restructuring of the employer organizations in the city and county. The Kentuckiana Education and Workforce Initiative, an arm of the Louisville Area Chamber of Commerce created to help shape local economic development, was disbanded in 1996 and replaced with a broader-based Workforce Development Council. The chamber and the economic development partnership merged in 1997, and, in 1998 the resulting Greater Louisville, Inc., established a Workforce Services Division that included school-to-career.

Instability among the city's employer organizations was accompanied by a decentralization of responsibility within the Jefferson County Public Schools. The state's education reform effort mandated a Site-Based Decision-Making Council in each school. The central office staff had only advisory capacities, making district-wide coordination and management difficult. With lean staffing in the school department, the task of linking employers and schools fell primarily to school-based staff in the magnet career academies. The more entrepreneurial schools benefited from this decentralization to secure strong partnerships and run creative work-based programs. However, this "every-school-for-itself" approach runs the risk of distributing the benefits of employer participation unevenly across the system, while also yielding duplicative and competing requests from schools to individuals firms.

Finding 5:

Providing work-based learning experiences is only one way that employers can contribute to systemic reform.

Other important roles include: 1) organizing political and civic support for reform; and 2) providing direct support to the school system to encourage and promote quality teaching and learning.

Employers in the BCI communities have been involved in significant efforts to open their workplaces to students for employment and learning experiences. At the same time, they have played additional roles that are critical to building and supporting quality school-to-career programming.

In most communities, employers are uniquely positioned to support reform and apply pressure on school and public officials to accelerate change and raise performance. In Louisville, Boston, and Philadelphia, business leaders helped recruit reform-oriented school superintendents. In all the BCI communities, employers developed and articulated—for schools and parents—the economic rationale behind improved student performance. Business leaders also worked with local government and school district leaders to build public and political momentum and support for the reform agenda.

- *Jefferson County:* For two decades, the Louisville business community has played a central role in articulating the need—and organizing broad support—for upgrading the quality of the local workforce and the education and training institutions that prepare them. Through the Chamber of Commerce and other agencies, the business community has commissioned and disseminated reports on the critical importance of workforce skill development to the region's future. It has also helped organize and sustain multi-sector forums for planning local workforce development strategies, including school-to-career efforts. In the 1980s, for example, the Louisville business community was the driving force behind reform of the local vocational education system and, later, in the passage of the state's innovative 1990 education reform act.
- *Boston:* The employer community promoted and pressed for clear goals and measurement systems for the city's school-to-career effort. It applied pressure for results and accountability that the reform leaders take seriously. And its commitment to helping design and monitor the accountability system gave credibility to the entire effort, encouraging employers to participate and building civic support for the long process of reform and institutional change.
- *North Clackamas:* Employers in North Clackamas—and in the Portland region more broadly—were active proponents of the state's education reform legislation. Business advocacy was instrumental in the state's decision to implement a Certificate of Initial Mastery and Certificate of Advanced Mastery; elements of the certificates are being piloted in North Clackamas.



Employers in the BCI communities frequently "rolled up their sleeves" and became involved in school-based instruction and learning. Many employers understood that providing work-based learning opportunities was only one side of the coin: students still spent most of their time on academic learning in classrooms. Some programs in BCI communities engaged employers in bringing real-world perspectives and standards into classroom learning. Employers participated in the

assessment of senior projects and served as resources to help students conduct research for academic projects with career themes.

In several BCI communities, employers also helped improve the quality of teaching and learning by providing summer or vacation work-based learning opportunities for teachers. This approach—often called teacher externships or internships—has become increasingly common in BCI communities and elsewhere as a way to help teachers understand modern workplaces and experience first-hand the kinds of skills and

competencies that young people need to succeed in today's work environment. Some employers find it easier to take teachers into their workplaces than to manage student placements. Moreover, many employers feel they can have a significant impact on more students if they help teachers reinvigorate instructional methods and curricula by bringing work-based learning into classroom activities.

Remaining Challenges

A central BCI goal was to develop and test community-connected learning models as a means to improve young people's education and career outcomes. By this yardstick, the initiative succeeded quite well. Several communities found that connecting young people to work-based learning opportunities and adult mentors boosted grades and attendance, motivated students to pursue postsecondary schooling, and connected students to better job opportunities both during and after high school. Moreover, community-connected learning appeared particularly beneficial in motivating low-achieving students to put greater effort into their school work and resist negative peer influences.

The experiences of Boston and Philadelphia demonstrate that it is possible to mobilize widespread business support for community-connected learning. At the same time, the problems encountered in Milwaukee and Louisville highlight issues that communities may face in trying to organize a divided or decentralized business community.

Encouraged by the results, all the BCI communities except Milwaukee have increased their commitment to community-connected learning. The level of enthusiasm for this strategy is encouraging, but to realize the potential of community-connected learning, these districts and their partners must address several significant challenges. These include:

- Securing stable funding and adequate staffing for intermediary organizations that can expand and manage community-connected learning opportunities;
- Expanding the number of work-based placements and adult mentors without sacrificing the quality of more intensive programs (such as ProTech in Boston or LEEP in Louisville);
- Making work-based learning and mentoring relationships available to the most at-risk students without overtaxing community partners;
- Improving the quality of instruction and mentoring that students receive in the context of performing productive work;
- Securing a greater commitment from educational leaders within a school district and individual schools to support applied learning beyond the classroom;
- Developing feasible strategies for integrating community and classroom learning; and
- Developing transitional services and more formal education and career supports for students after they graduate high school.

Project-Based, Community-Connected Learning: Professional Development for Instructional Change

BCI Strategy: Infuse contextual, authentic approaches to learning into academic instruction through professional development

School-to-career leaders in the BCI communities recognized that schools would have to tackle the complex issues involved in instructional change if they were to move reforms into large numbers of classrooms. At the same time, much work had to be done in the realm of structural and organizational changes. For the most part, the communities initially focused on reforms outside the teaching and learning relationship: expanding opportunities for students to learn about career options, finding business partners, and developing pathways, academies, and career majors.

Eventually, though, all five BCI communities addressed the issue of how to alter substantially the ways that students learn and teachers teach. Students rarely possess cross-cutting, high-performance career competencies (for example, the SCANS skills), and responsibility for developing those competencies could not, and should not, rest with employer partners alone. The realization grew that schools would have to become more adept at helping students develop workplace skills—and that traditional academic instruction is not well-suited to this task. The challenge was how to bring an expanded range of instructional methodologies into the classroom.

Professional Development for Instructional Change

Findings from the BCI Communities

1. The focus on strengthening core academics in the four urban districts meant that project-based, contextual approaches became one means to that end, rather than a way to integrate real-world applications and SCANS skills into the curriculum.
2. The district that made the most progress in helping teachers meet the dual goal of rigor and relevance was a suburban community that focused its resources on long-term professional development in high-quality, project-based learning.

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Finding 1:

The focus on strengthening core academics in the four urban districts meant that project-based, contextual approaches became one means to that end, rather than a way to integrate real-world applications and SCANS skills into the curriculum.

As the BCI's convenor, Jobs for the Future identified extended student projects as a promising means of improving academic achievement while also developing students' career competencies and cross-cutting, high-performance skills. For example, lectures, class discussions, and worksheets do not lend themselves well to teaching students how to manage time and money; acquire, evaluate, organize, interpret, and communicate information; participate as a member of a team; exercise leadership; or select and operate technologies appropriate to a given task. Yet these are precisely the kinds of skills a person acquires in conducting a well-designed project.

The approach favored by Jobs for the Future, and promoted through ongoing professional development opportunities in the sites, challenged teachers to meet certain quality criteria in

creating project-based curricula. These criteria are encapsulated in the "**Six A's**," a widely used rubric designed by Jobs for the Future's Adria Steinberg. The Six A's remind teachers that projects should strive not only for **A**cademic rigor but also to provide: a focus on **A**uthentic problems and challenges; opportunities for **A**ppplied learning, **A**ctive exploration, and **A**dult connections; and formative and summative **A**ssessment practices that offer students multiple ways of demonstrating their learning.



By the end of the BCI's first year, all five communities had identified groups of teachers for participation in professional development; all of the teachers were affiliated with school-to-career programs or in designated school-to-career schools. Led by Jobs for the Future's national faculty of expert practitioners, professional development introduced teachers to the Six A's and the basic techniques of project-based learning. In several communities, the teachers participated in professional development in teams that joined them with one or more employees from partnering businesses committed to district school-to-career reforms.

On the whole, teachers and their partners responded very positively. In several communities, high school teachers saw the fit between the Jobs for the Future's professional development activities and new district, state, or professional mandates to move beyond a textbook-bound, skills-and-drills curriculum. For example, in Boston, new graduation requirements called for "key questions" to guide instruction in each

The Six A's: Quality Indicators for Designing Projects

Academic Rigor

- Does the project lead students to acquire and apply knowledge central to one or more discipline or content area?
- Does it challenge students to use methods of inquiry central to one or more disciplines? (e.g., to think like a scientist)
- Do students develop higher-order thinking skills and habits of mind? (e.g., searching for evidence, taking different perspectives)

Authenticity

- Does the project emanate from a problem or question that has meaning to the student?
- Is it a problem or question that might actually be tackled by an adult at work or in the community?
- Do students create product(s), performance(s), and/or presentation(s) that individual outside of the classroom will find of interest and/or value?

Applied Learning

- Are students solving a semi-structured problem (e.g., designing a product, improving a system, or organizing an event) that is grounded in a context of life and work beyond the school walls?
- Does the project lead students to acquire and use competencies expected in high-performance work organizations (e.g., teamwork, appropriate use of technology, problem-solving, communications)?
- Does the work require students to develop organizational and self-management skills?

Active Exploration

- Do students spend significant amounts of time doing field-based work?
- Does the project require students to engage in real investigation, using a variety of methods, media, and sources?
- Are students expected to communicate what they are learning through presentations?

Adult Connections

- Do students have opportunities to meet/observe adults with relevant expertise and experience?
- Does the work of adults become more visible to students?
- Do adults from outside the classroom help students develop a sense of the real world standards for this type of work?

Assessment Practices

- Do students have opportunities to review exemplars of similar work products?
- Are there clear milestones or products at the completion of each distinct phase of the work, culminating in an exhibition, portfolio, and/or presentation?
- Do students receive timely feedback on their works-in-progress and also engage in periodic, self-assessment using clear project criteria that they have helped to set?

subject area and for graduation products in a number of core disciplines; in Jefferson County, the Kentucky Education Reform Act emphasized critical thinking skills. As a result of such pressures, teachers were particularly interested in discipline-based strategies and techniques (e.g., ways to introduce more writing into English courses, more problem-solving into mathematics, and more inquiry into science).

While these steps were important in terms of helping students meet more rigorous academic standards, they left teachers with little time for extending the curriculum to real-world applications or for crafting interdisciplinary projects through which students could meet career-related standards (e.g., the SCANS skills). Furthermore, as new, high-stakes state and district assessments revealed serious gaps in students' knowledge in major academic content and skill areas, it became even harder for urban districts to justify a commitment to long-term, focused professional development in contextual, project-based learning.

Finding 2:

The district that made the most progress in helping teachers meet the dual goal of rigor and relevance was a suburban community that focused its resources on long-term professional development in high-quality, project-based learning.

Only in suburban North Clackamas did professional development around project-based learning achieve the focus and scale necessary for systemic impact. Although North Clackamas parents, teachers, and administrators shared the concerns of their urban peers about boosting academic achievement, there was less concern that the schools were failing to meet basic educational needs. As teachers began to use what they were learning through the BCI's professional development opportunities, district curricular leaders realized that the approach had the potential to help teachers combine the academic rigor demanded in North Clackamas with the emphasis on career competencies in Oregon's state standards and education reform initiative.

The size of the North Clackamas district also made it easier to design a professional development program that would reach a critical mass of faculty members. In the past four years, over 200 teachers have participated in institutes and received coaching in project-based learning. This constitutes over one-third of the teachers in the district and demonstrates the potential of long-term professional development that joins the standards and school-to-career agendas.

Over the five years of the BCI, North Clackamas used project-based learning and other related, contextual strategies to join the standards and school-to-career agendas into a single, coherent approach to changing teacher practice. The work began modestly as a series of workshops, led by a consultant to Jobs for the Future. As this first group of 25 teachers, drawn from a number of schools, began implementing projects in the classroom, a second cadre began, with another group of teachers. In the second year, the first group continued to meet periodically with the consultant, ironing out implementation issues and learning to use research techniques to look systematically into the effects of their changed practice on student outcomes.

By the end of the second year, the district leaders realized that if the work were to be sustained, it would be critical to get the principals in the three district high schools excited and involved. Encouraged by the district's curriculum leaders, Jobs for the Future convened the principals and district staff into an "administrative cadre" that met several times a year to discuss ways to remove obstacles and provide support to this work. Each subsequent year, additional teachers cadres were added, while some members of the earlier cadres worked with Jobs for the Future to become teacher-facilitators, who help spread and support the work at the school level.

Another key sustainability factor in North Clackamas was the encouragement of teacher "action research" into the effectiveness of contextual learning practices. In the cadre's second year, when teachers were thinking about what they were using as evidence of student learning, Jobs for the Future worked with them not only to make assignments more authentic and more project-based but also to study these changes for their impact on students.

A voluntary subset of those teachers carried out action research projects, culminating in written reports of the findings. Having designed a project that involved doing things differently in the classroom, a teacher would identify a particular practice or aspect of the project that might have made a difference for students. Guided by the Jobs for the Future consultant, the teacher would come up with two or three ways to gather evidence of the impact.

For example, a physics teacher, using Oregon's state-scoring guide for lab reports, compared students' traditional reports to those done when completing a bridge-building project. The teacher found that most students scored considerably higher on the bridge experiment: by comparing the lab reports, he demonstrated that students created clearer research questions and made more carefully reasoned hypotheses; their experimental designs were more detailed and provided a better sense of the subtleties and difficulties of creating a truly scientific experiment to test a research question; they were generally more involved in finding meaning in their work and in using appropriate science vocabulary and concepts.

Over time, evidence from more than a dozen teacher action research projects proved to be an important factor in garnering long-term support for this work. In a standards-and-testing environment, it is especially important for teachers to document how changes in their own practice impacts student learning. Such documentation helps teachers convince themselves that they are on the right track, and it helps convince various stakeholders to support what they are doing.

Remaining Challenges

The contrast between the ability of the suburban district to implement an effective professional development program and the difficulties faced in all four urban districts raises a question: how can an urban district harness the power of project-based and other contextual learning strategies as a means to promote both rigor and relevance? Of the cities, Boston has made the most progress in taking on that challenge.

The school-to-career office moved from offering "generic" training in project-based learning to offering customized, discipline-based professional development that helped teachers upgrade the academic core and integrate real-world applications and SCANS skills. Also, when materials were available, district and school staff have purchased high-quality, project-based curriculum units and training for teachers. (For example, a local business spin-off from the Massachusetts Institute of Technology provided hands-on physics materials, curricula, and training to science teachers.) Finally, in high schools that have committed to using school-to-career as a whole school change strategy, discipline-based content coaches spend at least two days each week providing hands-on classroom help to teachers experimenting with new methods.

The urban and suburban communities alike found that project-based learning was most likely to become institutionalized in schools that offered career majors and pathways. Moreover, curriculum leaders in North Clackamas have found the reverse to be true as well: teachers trained in project-based learning have been more ready and better able to design focused programs of study (career majors) and to integrate career-related learning experiences into traditional academic courses, as the district implements these aspects of Oregon's educational reform act. The first North Clackamas teachers participating in professional development related to project-based learning had begun implementing projects on their own, but the district-wide embrace of Oregon's state-mandated, career-focused electives and programs of study for juniors and seniors brought the design of interdisciplinary projects into the center of curriculum design for the high schools. In Boston and Philadelphia, which encouraged high schools to create career pathways as part of restructuring, a number of schools began to implement senior projects or capstone projects as "signature" experiences for students in their pathways.

Even in these districts, however, project-based learning is likely to remain somewhat marginal until more complex demonstrations of knowledge and performances of understanding become part and parcel of the system by which students and schools are assessed and held accountable.

Benchmarking: Setting Goals and Measuring Progress

BCI Strategy: Set clear performance goals—benchmarks—and measure progress in implementing key practices and their impact on students

Borrowing a term from business, Jobs for the Future put "benchmarking" into the title of its initiative to signal the importance of performance standards—measurable indicators of progress towards clearly defined goals—in keeping systemic, large-scale reform on track. As defined by Jobs for the Future, the benchmarking process focused on helping key stakeholders in a community identify best practices, set agreed-upon goals in relation to those practices, and develop measurable indicators of progress towards those goals. The goal was to provide an accountability mechanism for holding school-to-career partners responsible for the process of reform as well as its results.

Such a process is particularly important in implementing a complex and ambitious systemic reform initiative. School-to-career involves altering not only how schools are organized, but also how major systems—schools, employers, and government—interact and interrelate. Its comprehensiveness and institution-spanning approach is a challenge to the implementation of a high-quality model. If educational visions remain vague and abstract, those that are most far-reaching are also most subject to being either watered down or simply ignored. In pursuit of reform that fundamentally revises the high school learning experience, Jobs for the Future and the BCI communities translated broad goals into concrete practices that schools and their community partners were responsible for instituting. Performance measures were based on a clear, measurable definition of success, and communities could see incremental progress.

The BCI hypothesized that a multi-site initiative could add value through collaboration among sites to develop a set of shared goals and indicators that each community would use as a framework for its work. To be selected as a "benchmark community," each of the five partners initially signed on to a set of five-year goals proposed by Jobs for the Future. Within the first year, the communities came together to refine those goals and develop specific indicators (see *Appendix, page 60*).

Although the benchmarking process helped define a common agenda across the five BCI communities, how the benchmarks were used played out differently in each. Having agreed on the "what" of the initiative, each community had to decide on the "when," "where," and "how" by crafting a strategy based on local needs and resources. Still, although priorities and strategies differed, each community made a commitment to develop a measurement system that would enable it to: 1) track its own progress in implementing new practices; and 2) assess the impact of those practices on students.

Benchmarking: Setting Goals and Measuring Progress

Findings from the BCI Communities

1. Tailored to the local context, benchmarking can be a high-leverage strategy for driving systemic change.
2. Measuring progress in the implementation of reform practices helps to protect these practices in the early stages when outcome measurement would result in premature judgments of effectiveness.
3. The communities that made the most progress in systemic school-to-career reforms developed measurement strategies to document and measure the specific contribution of school-to-career approaches.

Finding 1:

Tailored to the local context, benchmarking can be a high-leverage strategy for driving systemic change.

The BCI's five-year goals provided a comprehensive framework for systemic reform, rather than a blueprint for each community to follow. The assumption was that local stakeholders would determine the focus and sequence of action, using the BCI's broad framework as a lens for assessing opportunities and resources. Jobs for the Future designed the benchmarking process to help local partners in that task.

The goal of benchmarking for advancing school-to-career is to measure the right things at the right time, not to collect every bit of data all the time. Measurement is employed for the strategic purpose of defining program-development priorities and tracking their progress. It must correspond to the level of local program development, as well as to that community's choice of next steps. It would be pointless to gather data on aspects of school-to-career education that are neither in place nor high on the agenda for implementation. Choosing what to measure—and when—is key to improving implementation and maintaining accountability for progress as a school-to-career program takes shape.

Measurement priorities varied with each community's history of educational reform and its particular reform strategy. For example, the ways in which Boston and North Clackamas used benchmarking differed significantly, arising out of the local context and priorities. Yet in both systems, measuring appropriate indicators of implementation prodded structural and instructional change along a clearly defined path. And measuring student outcomes, sensitively and in ways tied to educational changes actually taking place, yielded evidence of the most elusive phenomenon in educational reform: success-in-the-making.

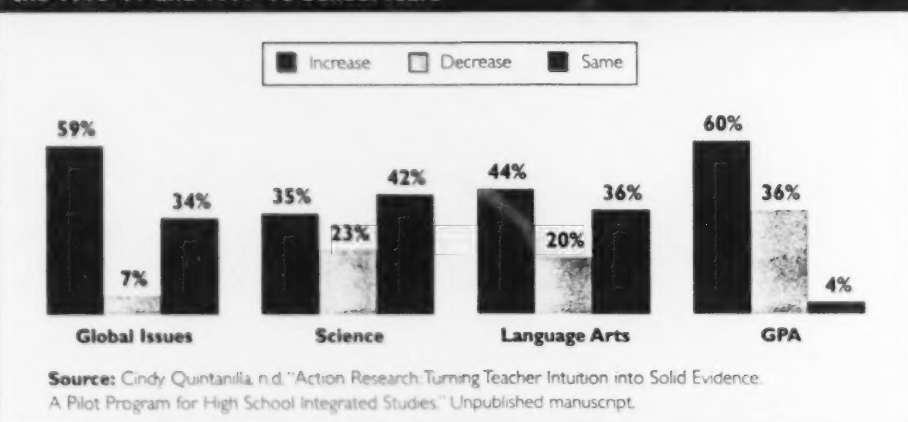
- **North Clackamas:** Initially, high school teachers and administrators were skeptical about school-to-career. Many saw it as narrow, career-oriented education and showed little interest in reorganizing their schools into theme-based small learning

communities. At the same time, some teachers were attracted to project-based, real-world-connected instruction as a way to motivate students and promote critical thinking. Over the BCI's first three years, Jobs for the Future trained several groups of faculty members—ultimately, over a third of North Clackamas teachers—in project-based learning and related strategies (see *Chapter Three*). During this time, measurement largely consisted of teacher surveys conducted by the district to determine the extent to which the new instructional techniques were being put to use in the classroom.

The role of measurement began to change with the introduction of new state content standards for academic disciplines, with corresponding assessment tests. Teachers who adopted the project-based approach were convinced that it was the best way to teach deep problem solving and critical thinking, but they worried that district and school demands to address the myriad standards would create pressure to return to more traditional, material-covering methods. These educators needed hard evidence that in-depth exploration of real-world problems was effective in ways that might not show up on standards-based tests. Measurement shifted to "action research"—determining the new methods' impacts on student achievement.

Heartening results came from North Clackamas's most advanced experiment in educational restructuring: Gaining Access to Excellence (GATE), a pilot cluster blending ninth- and tenth-grade students at Rex Putnam High School. Research conducted by the teachers showed that the interdisciplinary, project-based curriculum not only improved student performance across several measures of achievement, but it also proved an effective approach to fulfilling state standards because each in-depth project touched on multiple content standards. Circulation of this research boosted support—within the school and in the district office—for expanding the use of interdisciplinary, project-based instructional approaches.

North Clackamas • Change in Student Grades in the GATE Program Between the 1996–97 and 1997–98 School Years



Implementation in North Clackamas will now turn toward developing institutional structures to support project-based, experiential teaching methods. The benchmarking process will help define and monitor these structures, as well as further track the impact of this evolving educational approach on students. The district plans to use data from the 1999-2000 school year as a baseline for measuring changes in the performance of juniors and seniors because the fall of 2000 marks the beginning of implementing pathways for students in those grades. Although all upper-grade students will be in pathways, the pathways will not initially offer career-related learning experiences for all students. The plan is to compare students who are participating in career-related learning experiences with those who are not.

- **Boston:** Since the BCI's inception, the Steering Committee for Boston's school-to-career initiative has played an active role in pushing for concrete evidence of action by the schools. Early in the initiative, the Steering Committee formed a collaborative evaluation group, with members representing the PIC; the Boston Public Schools school-to-career and research assessment, and evaluation offices; school-to-career coordinators in selected schools; and Jobs for the Future, which provided technical assistance. This group took responsibility for developing a means of holding each Boston partner accountable for the change to which they had collectively committed themselves. The measures the group developed for assessing progress were geared both to the end goal of improved student achievement and to assessing the specific activities and priorities in each stage leading to that goal.

During the first stage of its work, the evaluation group worked hard to develop a definition of school-to-career, centering it around career pathways that fulfilled specific requirements for integrating academic and worksite learning. School-to-career coordinators in the schools gathered data on each nascent pathway that indicated the extent of implementation, including the numbers of students, worksite placements, and academic and career-related courses. The school department began to modify its data system to enable comparison between the performance of students in pathways and the student body as a whole on such indices as grades and attendance. As expectations for school performance became more specific and more concrete, so too did demands on business partners. Career pathways required "a multi-year sequence of worksite experiences integrated with academic learning." Based on this goal, standards were set for businesses that categorized each partnership according to the extent of employer effort, measured by hours of worksite learning offered to students.

In the second stage of its work, the evaluation group shifted attention from *how many* career pathways or work-based learning slots were in place to the *quality* of these experiences and their contribution to student performance. The school district had developed the capacity to compare the performance of pathway and non-pathway students based on grades, standardized test scores, and other traditional measures. To these were added non-traditional indicators, such as employer evaluations of students. Assessment rubrics were developed, geared both to the

district's new learning standards and to a set of school-to-career competencies that guide learning plans for worksite experiences.

Currently, Boston school-to-career coordinators are learning how to access and analyze student data by pathway and how to present findings in a form useful to teachers, employers, and other community partners. In this way, the measurement tools developed citywide can inform the school improvement process school-by-school.

Finding 2:

Measuring progress in the implementation of reform practices helps to protect these practices in the early stages when outcome measurement would result in premature judgments of effectiveness.

In any method of performance measurement, student achievement is the central issue—and the thorniest. An exclusive focus on student performance exposes fledgling reforms to premature judgment and certain disappointment. At the same time, neglecting student achievement altogether leaves reformers unaccountable for the efficacy of their program.

The goal of the BCI measurement system was to foster an environment that protects and nurtures innovation, holding off premature judgment even as it maintained improving student outcomes as the ultimate measure of success. The strategy was to reward the progress of the partners in implementing practices—as stated in the BCI goals—that prepared the groundwork for improved student outcomes, rather than to fault teachers and schools for not achieving instant success. At the same time, the initiative kept the primary focus

on student impact (e.g., working with school districts to modify student data systems to make it possible to compare student outcomes, establish baseline data, and begin to monitor impact).

- *Philadelphia:* Early in the BCI, the Office of Education for Employment gathered implementation data to share with the city's School-to-Career Leadership Group. The data revealed substantial progress in the numbers of small learning communities with a career focus, employer partners, and students participating in work-based learning experiences (*see the introduction*). Recognizing the importance of data, EFE developed the database capacity to monitor the performance of all 3,500 students participating in work-based learning. The benchmarking effort then began to focus on attendance, drop-out rates, and other measures of student engagement, initially for diagnostic, continuous improvement purposes. Finally, the district contracted with outside evaluators to look for the impact of work-based learning on student outcomes. (*See Chapter Two for a summary of preliminary findings from the evaluation.*)
- *Boston:* The evaluation group went through a similar process, first collecting data on implementation of key program elements, while helping the district to build a data-collection capacity. As the effort matured, the group began to gather data on the impact of work-based learning and other school-to-career strategies on student engagement and student achievement. This started with the ProTech program, the longest-standing and most developed of the school-to-career programs in the city,

and eventually branched out to newer pathways. For ProTech, the impact evaluation went the furthest, with a longitudinal study of a sample of ProTech students to assess their staying power in college, as well as their earnings in the years following their participation in the program (see *Chapter Two*).

Finding 3:

The communities that made the most progress in systemic school-to-career reforms developed measurement strategies to document and measure the specific contribution of school-to-career approaches.

Any education reform, including school-to-career, must prove its effectiveness if it is to move beyond “early adopters” to the majority of people affecting teaching and learning in a district. In the BCI, one of the most important tasks for the partners in each community was to create systems to document and measure the impact of model practices, while relating those practices to the broad goals of the district’s systemic initiative and concrete activities that schools and their community partners were responsible for instituting.

As described in Chapter One, Boston and Philadelphia situated their school-to-career reforms within broader systemic education reform initiatives and could move forward on the school-to-career agenda because they gave concrete, measurable

form to BCI activities (e.g., career pathway development in Boston, work-based learning experiences and career-theme small learning communities in Philadelphia). The other two large urban districts, Milwaukee and Louisville, never clarified their models for school-to-career; as a result, it never became clear what to measure or how to test school-to-career’s contribution to overall education reform.

In addition to being clear about who and what they were measuring, Boston and Philadelphia looked beyond readily available indicators. The BCI objective in every community was to measure long-term student success, something that scores on standardized tests do not capture well. The school districts in Boston and Philadelphia made explicit efforts to build new, more comprehensive systems of accountability in partnership with higher education and business partners.

- **Philadelphia:** The school district was very successful in cultivating partnerships with researchers in local universities to examine the impact of work-based learning. As described in Chapter Two, it commissioned an opinion research firm to conduct a follow-up survey of public school graduates who had and had not participated in work-based learning. The survey measured satisfaction with the program as well as the current employment and educational activities of graduates.
- **Boston:** In partnership with the Northeastern University Center for Labor Market Studies, Boston has expanded its longitudinal research from the ProTech program to include all public school graduates who were involved in career pathway programs and work-based learning. As in the ProTech study, this data will compare these students to a matched group of peers on labor market and postsecondary educational outcomes.

Since the goal of K-12 systemic education reform is to prepare young people for college and careers and assist them in the transition to productive adulthood, the type of longitudinal data that Boston and Philadelphia have begun to collect is of particular importance. Ultimately, the analysis of such data will enable a community to decide the value of its investment in the BCI's community-connected learning strategies.

Remaining Challenges

In Boston, North Clackamas, and Philadelphia, school-to-career has advanced from an innovative program involving a small number of students to a broad-based systemic reform that can make a difference for large numbers of young people. Yet it is not enough to demonstrate that community-connected learning reaches students in general. It is equally important to know *which* students benefit.

Achieving the potential benefits of a community-connected approach to instruction rests with its efficacy in improving the academic success and career opportunities of *all* students. Do a community's school-to-career models effectively serve students from the range of academic backgrounds? Are girls faring as well as boys? Are English language learners benefiting to the same degree as native English speakers? Using data to investigate these and similar questions can ensure that issues of equity are central as a community's education system grows.



Gaining access to and becoming adept with using such information is a challenge. While school systems have well-established mechanisms for collecting data—many systems are awash with data collected for various purposes—information management departments are rarely well equipped to manipulate data in ways that serve the needs of school-level change leaders and community partners. The technology now exists for schools to access and analyze their own data; districts need to facilitate the ability of change leaders and their partners

to use that information to diagnose a school's needs and assess progress. Districts also need to provide school-level leaders with training and support that helps them analyze data and present findings clearly and concisely to others in the school, as well as to community partners and funding agencies.

Finally, Boston, North Clackamas, and Philadelphia face a fundamental challenge as they move forward with the benchmarking process. In this era of standards-based reform, public attention focuses on a single type of measure: scores on high stakes standardized tests. These scores may be used to determine everything from the future of each individual student to decisions about whether reform efforts are working.

In contrast, the BCI communities define success in terms of a broad set of student outcomes; some of which are difficult to measure through standardized testing. In seeking to understand how community-connected learning alters young people's long-term educational and career trajectories, communities will need to collect an array of student outcome data. Just as important, they will need to build a case that such an array paints a far richer picture of the effects of reform on young people than does any standardized testing regime.

Benchmark Communities Initiative: Five-Year Goals

While the precise design of a school-to-work system will vary by community, there are basic features that characterize a comprehensive system. JFF expects that by the end of the fifth year, JFF benchmark communities will have made the following progress toward establishing the foundation elements of a community-wide work and learning system:

I. Improve student achievement through an approach to education in which all students learn rigorous academic content by working on real-world problems.

The school-to-work movement is part of a broader effort to change the way that schools teach and the means by which students learn. School-to-work advocates share a vision of schooling in which students develop knowledge and skills by planning and producing projects, posing and solving real-world problems, and presenting and explaining their work through different media. While the school-to-work movement cannot and should not assume the full burden of this education reform agenda, it can contribute in important ways by promoting more hands-on, experiential learning opportunities.

By the end of five years, JFF expects benchmark communities to have adopted the following school reforms:

High Academic Standards for All

1. Establish high standards of academic achievement that all students are expected to reach.
2. Incorporate critical work-related skills needed for success in the new economy—such as collaboration, problem-solving, managing resources, and career planning—into school district standards for student achievement.
3. Replace educational tracks defined by postsecondary destination (e.g. college-prep versus general track) with programs of study which prepare all students to pursue higher education and high-skilled employment.

Transform Teaching and Learning for All Students

4. Transform teaching and learning so that *all* students master rigorous academic content through work on complex, real-world problems in the classroom, the workplace, and the community.

For high school students, such programs of study should consist of:

- at least two academic subjects per year, such as English, science, social studies, and math, in which students learn by means of designing and applying solutions to real-world issues. Course work should include planning and producing complex projects that connect the classroom, the workplace, and the community.
- an intellectually rigorous sequence of work-based and community-based learning experiences that are fully integrated with academic instruction. This includes paid work experience in which students master higher-order thinking skills in the context of challenging work assignments.
- a sequence of electives (such as drafting, computer programming, and computer aided design) that allows students to pursue advanced study related to broadly defined career areas.
- opportunities to take courses at local postsecondary institutions in the upper grades, thus expanding the range of courses related to a student's academic and career interests and promoting a successful transition to postsecondary learning.

We expect communities to use a range of strategies for achieving this, including the establishment of career and thematic majors.

For middle and elementary school students, such programs of study should consist of:

- regular use of instructional approaches in which students learn core thinking skills such as mathematical reasoning, oral and written communications, and scientific investigation through designing and applying solutions to real-world problems in the classroom, the community, and the workplace.
- incorporation into the curriculum of critical life skills such as conflict resolution, team work, leadership, self-discipline, and knowledge of the world of work.
- regular use of field-based learning experiences in the workplace and community to reinforce and extend classroom lessons in which students learn essential academic and life skills by addressing a community need.

By the end of year five, at least 50% of students in grades K-12 should be participating in educational programs that meet these requirements. Within ten years, *all* students should have the opportunity to participate in such reshaped educational experiences.

5. Incorporate work-based and community-based learning as a core element of the high school curriculum. All high school students should have the opportunity to master a subset of high-level academic and applied proficiencies in their chosen course of study through completion of a work-based or community-based educational placement and related projects. These placements and projects should be fully integrated into the curriculum and guided by learning plans that establish close connections between classroom instruction and field experience.

Within five years, all high school students should participate in at least one of the following integrated work-based or community-based learning options:

- paid summer traineeship or paid/unpaid internship during the school year connected to a student's career interests and integrated with at least one academic course.
 - a progressive sequence of paid on-the-job learning experiences that are integrated with at least one academic course per semester in addition to any career-related courses (e.g. architectural drafting).
 - employment in a school-based enterprise in which community and business partners complement teachers as regular coaches and mentors to students and which is integrated with at least one academic course per semester in addition to any career-related courses.
6. Adapt instructional approaches, class schedules, and staff development strategies to support student learning of high-level skills through solving real-world problems. Within five years, JFF expects participating school districts to have made major changes in these areas, including:
- alteration of school schedules to support integration of instruction across disciplines and between the classroom and the workplace/community. This includes clustering and block scheduling of students and common planning time for teaching teams assigned to develop thematic programs of study.
 - changes in staff assignments and classroom design so that teachers can facilitate integration of worksite, community, and classroom learning. This includes providing teachers with regular opportunities to visit worksites so that they can familiarize themselves with the workings of the industry and help students reflect on worksite experiences.
 - adoption by participating school districts of a comprehensive staff development plan which empowers teachers and administrators to develop and implement more applied, project-based approaches to teaching and learning.

Improve Methods to Assess Student Learning

7. Implement a new district-wide assessment system that emphasizes performance-based assessment of student achievement. Such assessment would measure student performance on complex projects and other applied learning tasks.
8. As part of the new system, adopt alternative assessment methods which enable students to earn academic credit for worksite learning experiences and substitute practical learning experiences and independent projects for seat time in class.

Ensure Success of All Students

9. Take aggressive, affirmative steps to implement a range of instructional strategies and social supports to ensure the success of all students in school-to-career programs of study, particularly those students with a history of poor grades and attendance. Effective strategies that communities can adopt to promote equity include:
 - creating supportive, family-like environments by sub-dividing large schools into smaller learning communities, such as schools-within-a school or grade level clusters.
 - adapting instructional approaches to accommodate different learning styles.
 - establishing mentoring programs in which caring adults from the school, the community and the workplace provide consistent support and encouragement to students.
 - offering tutoring, after school and Saturday classes, and summer programs.
 - involving parents and other family members in each student's education.
 - making counseling, case management, and health and social services available to students and families in need.
10. Ensure that students who have failed in traditional classrooms have the opportunity to participate in school-to-career programs by fully integrating alternative educational settings in a community's school-to-career system. This includes support for development of applied, project-based approaches to learning in alternative settings to attract out-of-school youth back to school and aggressive recruitment of business and community partners for these programs.

Improve Student Achievement

The reform of the K-12 learning environment should lead to substantial gains in student achievement of academic and practical skills needed for success in higher education and the modern workplace including:

11. Improvement in high school completion rates and school performance of students who participate in school-to-career programs of study. JFF expects participation to result in significant improvement in attendance, grades, and graduation rates and the percentage of students meeting district and state academic performance standards. In addition, students who complete school-to-career programs of study should be performing at a level which qualifies them for entry into the state's university or four-year college system.
12. Increase in the percentage of students entering postsecondary programs including four-year colleges, two year community and technical colleges, and firm- and union-sponsored occupational training programs.
13. Increase in the percentage of students who graduate high school with work-related knowledge and skills needed for successful employment.

II. Improve career opportunities for young people by creating a system of structured pathways to higher education and high-skilled employment.

Providing access for young people to postsecondary education and quality jobs in a systematic way requires new labor market practices and institutional arrangements. Within five years, JFF expects benchmark communities to have achieved the following reforms:

Establish System Based on Shared Responsibilities and Mutual Accountability

1. Establish written agreement(s) among business, education, labor, postsecondary, government, and community leaders to establish a system of structured pathways to higher education and high-skilled employment through partnerships based on shared responsibilities and mutual accountability. Each partner has a distinct but equal contribution to make toward the goal of student advancement.

Schools commit to:

- improve student preparedness for postsecondary education and high-skilled employment by vigorous adoption of school-to-career programs of study (detailed above.)

Employers commit to:

- provide high quality worksite learning experiences and assistance in development of applied curriculum.
- create clear incentives for students to work hard in school by considering school-to-career programs as their first source for recruitment of new employees and by taking student performance into account in hiring decisions.

Postsecondary institutions commit to:

- expand opportunities for students to pursue college level studies while still in high school.
- adopt competency-based standards for admissions and granting of credit that support use by secondary schools of performance-based assessments and experiential learning.
- improve articulation between high school and postsecondary courses of study and among postsecondary programs.
- improve postsecondary retention and completion rates through use of more applied, experiential approaches to instruction and better counseling and support services.

Local government commits to:

- reallocate funds and redesign policies to support development of a school to career system as the centerpiece of its youth development and employment efforts.
- assume full responsibilities of a major employer in the school-to-career system, including the provision of learning-rich worksite experiences to students.

Labor commits to:

- help develop high-quality, work-based learning experiences in which students receive regular mentoring and coaching.
- expand young peoples access to union-sponsored apprenticeship training programs.

Community-based organizations commit to:

- provide high-quality community service learning and work-based learning experiences to students.
 - integrate the rich array of youth development, social services and job training programs they provide into a community-wide school-to-career system.
2. Identify or establish an intermediary with a stable funding base to implement critical connecting activities required by a school-to-career system including:
- serving as a single point of contact for employer recruitment to secure quality worksite and community learning opportunities.
 - coordinating the development of structured pathways for young people to higher education and high-skilled employment.

Achieve Widespread Employer Involvement

3. Achieve widespread involvement of employers in the school-to-career system. This includes the provision by the employer community of a sufficient number of high quality, work-based learning experiences to serve all students within ten years. Communities will determine the number of employers (small, medium, and large) required to meet this goal and will establish recruitment targets based on these requirements.

Provide Career Development and Job Placement Services

4. Provide a developmentally appropriate sequence of career development activities for young people that begins in kindergarten and is woven into the K-12 curriculum. Provide formal career counseling and planning services as well as job placement services to older youth. This includes connecting youth to the services provided by one-stop career centers in communities with centers.

Provide Seamless Transition to Postsecondary Learning

5. Achieve widespread participation of postsecondary institutions in providing students structured pathways from high school to higher education and advanced occupational training. Specifically, students participating in school-to-career programs of study should receive the following support from postsecondary partners:
- opportunity for dual enrollment (i.e. students take courses for which they earn both high school and college credit) in their senior year.
 - guaranteed admission to associate degree technical and professional programs offered by partners for students who meet entrance standards.
 - formal recognition by postsecondary partners of performance-based standards and assessments in admissions decisions and in granting of credit and advanced standing.
 - opportunity to continue preparation for high-skilled careers through programs which combine worksite learning with classroom instruction that emphasizes learning through application.

Improve Student Postsecondary and Employment Outcomes

6. Increase significantly placement and retention of young people (ages 18 to 25) in skilled employment as measured by wages, level of skill required, and opportunities for advancement.
7. Increase significantly the percentage of students completing postsecondary programs of study.
8. Eliminate disparities in employment and postsecondary completion rates based on ethnicity and gender.
9. Establish system to track education and employment outcomes of young people in the community (i.e. high school completion rates, postsecondary entrance and completion rates, employment and earning of graduates).



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